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## PERSONAL EXPERIENCE IN MANAGEMENT OF HYDATID CYST WITH REPORT OF UNUSUAL COMPLICATION\*

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ALL OF US are acquainted with the parasitologic entity known as hydatid cyst, which is one of three forms of echinococcus granulosus, a minuscule parasite of the tapeworm family.

To begin with, I should like to point out that, as far as geographic distribution is concerned, the usual concept of echinococcus being connected with the rural population of certain areas, such as Australia, New Zealand, or South Africa, in my opinion is incorrect.

The distribution of the disease is much wider than is generally realized and probably no area of the world is immune to it. We know of a large number of cases from Mediterranean countries and from Russia and Mongolia as well. The disease is found in Europe, in such different countries as Luxembourg, England, and Spain, and each year new cases are reported from all corners of the world; for example, India, South America, Canada, and among the Alaskan Eskimos. The small number of cases in the United States is probably due to the high standard of food hygiene and personal living, even among the rural population.

Now returning to hydatid cyst, it is of great interest to remember the vicious circle of the echinococcus, which in the full adult form lives only in the dog's intestine, or in animals related to the dog, such as the wolf, fox, or jackal. A dog becomes infected by eating organs of the sheep, pig, or camel, where echinococcus lives as a larva, or hydatid cyst. The adult worm disseminates from the dog intestine a large number of eggs which, being excreted with dog's feces, contaminate the entire environment, such as grass, soil, and dog's hair. Cattle become infected directly from the grass, and man by contact with dog's hair and nonwashing of

hands before meals.

An ingested egg of the echinococcus passes into the duodenum and upper intestine, where the microscopic larva hatches. The larva then penetrates into the intestinal wall, eventually enters lymphatic or venous capillaries, and is carried with the stream. Usually it reaches the liver, where it settles down and undergoes vesicularization, which metamorphosis is the cause of hydatid cyst.

The hydatid cyst then presents itself as a spherical cystic mass composed of two walls or layers. The most important is the interior layer, or so-called germinative membrane, which produces scolices. One large cyst may contain many thousands of so-called broad capsules, each of which contains 20 to 30 scolices.

In man, however, instead of immediate production of scolices from the germinative membrane, we have the production of so-called daughter cysts, which are exact replicas of the primary or mother cyst. The daughter cysts contain scolices, and when transplanted to some other organism, continue to develop and grow. Even the scolices themselves when disseminated may undergo vesicular metamorphosis and produce secondary hydatid cysts. Sometimes we may find so-called sterile hydatid cysts in which no daughters or scolices develop, but this is an extremely rare phenomenon.

As I mentioned before, a hydatid cyst usually grows in the liver, and this represents about 65 per cent of cases, but an egg can travel further in the bloodstream and settle in the lung, which is the second most usual location of hydatid cysts (24 per cent). Less common sites are long bones (about 3 per cent), brain (1 per cent), muscles (5 per cent), and no organ is spared. Theoretically and practically, wherever there is blood supply, echinococcus eggs can be carried with it.

The pathological picture develops when the hydatid cyst grows to such proportions that it exerts pressure on surrounding structures comparable to a growing tumor. For instance, in the liver it may obstruct the bile ducts or blood vessels, or if in the lung, a bronchus. In the bones we witness patho-

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logical fractures due to erosion, and in the brain varying symptoms depending on the localization of the cyst. So the chief pathological consequences of a hydatid cyst are obstruction or destruction by pressure on surrounding structures.

On the other hand, there are known instances of spontaneous recovery by calcification and considerable shrinkage of the cyst, or by expelling of the cyst through the biliary passages, bronchi, or alimentary canal.

The treatment is surgical, and the purpose is to remove the cyst completely if accessible. It is possible to do so in some cases, but in the majority the hydatid cyst is of such proportions or situated in such places, that excision is impossible, even if we have access to the cyst. In such a situation we employ the method of marsupialization, which consists of evacuating the cyst and of removing the germinative membrane. The remaining fibrous outer wall is left to collapse and to shrink slowly until the cyst is completely obliterated. This is the best method.

However, rough handling of the cyst may produce the undesirable rupture of its wall, with consequent wide dissemination of the daughter cysts. Also, failure to remove completely the germinative membrane may lead to prompt recurrence. To eliminate this possibility, 4 per cent solution of formalin is instilled, which kills all of the scolices and the cells of the germinative membrane as well.

My own experience with some 140 cases has convinced me of the effectiveness and safety of this procedure, notwithstanding the prolonged and annoying post-operative hospitalization.

Of the usual complications I should like to mention the two most frequent: The first of these is rupture of the wall of the hydatid cyst with dissemination of its contents and production of numerous new hydatid cysts. Sometimes sudden leakage of the hydatid fluid into the abdominal cavity may produce severe or fatal anaphylactic shock. The second most common complication is secondary infection of the hydatid cyst, which is thus transformed into a purulent abscess of tremendous proportions.

#### Case Report

I should now like to report an unusual complication which occurred in one of my patients and, as far as I know, has never been described before.

The case is that of a male, thirty-seven years old, and a new immigrant from Morocco. Except for lues at the age of fourteen, he was never ill before. For his lues he had already received treatment in Morocco, and for the last thirteen years his Wassermann reaction had been negative. He is married, but has no children.

For the last ten months he complained of a distended and painful abdomen, severe constipation,

and pressure on the urinary bladder, causing frequent micturition. The patient says that, on palpating his abdomen, he found a tumor that wasn't there before. He reported this to his doctor, who on examination found, not one, but two tumors, and promptly sent the patient to the hospital for examination and treatment. His diagnosis was hydatid cyst.

On admission we found a well-built, well-nourished male. General clinical examination demonstrated nothing pathological, except for a bulging cystic mass above the symphysis pubis and a small, orange-like tumor in the left upper abdomen. This tumor was obviously pedunculated because it could be moved to the mid-line and back. The abdomen was distended, meteoristic, but not painful on examination. The liver was not enlarged, and the spleen was not palpable. On rectal examination it was possible to feel a bulging cystic mass, pressing on the anterior wall of the rectum. We were sure we were palpating an extension into the pelvis of the same tumor as that in the suprapubic region. The prostate was small, and frequent urination was due to the pressure of the tumor on the bladder, and not to prostatic enlargement.

Urine examination was without pathological findings. Culture sterile. Blood count was normal, except for elevated number of leukocytes (11,000) and 5 eosinophils on differential count. Blood sedimentation rate and routine serological examinations including liver function tests were normal. Examination of feces revealed nothing. Two tests for echinococcus, the cutaneous test of Cassoni and Weinberg blood complement fixation test were inconclusive.

Roentgen examinations, however, were most helpful. Intravenous pyelography showed bilateral hydronephrosis due to the pressure on the bladder. Barium enema demonstrated a large pelvic tumor pressing on the rectum. Other X-ray examinations such as gastrointestinal series and cholecystography revealed no pathological findings. Lungs and heart were normal, and X-rays of skull and long bones failed to demonstrate any hydatid cyst or other pathology.

On the strength of these examinations, a tentative diagnosis of hydatid cyst was made, and operative treatment suggested. The patient was operated upon under general anesthesia in November, 1956.

After opening the abdomen, we found a small cystic tumor, the size of a tangerine, suspended by a long peduncle which originated from the mesentery of the transverse colon. This tumor was quickly removed. The liver presented a perfectly normal appearance and consistency. The spleen was normal. There were no enlarged glands in the mesentery, and no pathological findings in the stomach, duodenum, or small intestine. The gall bladder

was perfectly normal and the head of the pancreas soft.

In the pelvis, lying above the urinary bladder, we found a big cyst which on aspiration produced clear, transparent, water-like fluid, typical of hydatid cyst. We aspirated as much of the fluid as possible (about 250 cc.) and refilled the cyst with 4 per cent solution of formalin, which as I mentioned before is a standard procedure. After 15 minutes the formalin was aspirated and the cystic wall opened. All of the germinative membrane was removed, together with numerous daughter cysts imbedded inside.

Before ending the operation, I examined the bottom of the cyst looking for some fragments of germinative membrane, when I noticed that the bottom was protruding, instead of being concave as it should have been. On pressing further, I felt fluctuation, and it occurred to me that maybe there was a second cyst below the first one.

I tried needle aspiration and surely enough, received the same clear typical fluid as before. Repeating the procedure we aspirated even more fluid than the first time and again replaced it with solution of formalin. We eventually opened the second cyst and found it to be larger than the first one, and extending very deep into the *pouch of Douglas*. Obviously this was the cyst that we felt on rectal examination. We destroyed the partition between the two cysts, again extracted the germinative membrane and daughter cysts, and finished the operation by marsupializing the empty pocket.

Post-operative treatment was long and slow, but uncomplicated. The large empty space contracted slowly and after a month was nearly closed. The patient felt very well and all his complaints vanished. He was sent home after fistulography and received ambulatory treatment until the wound was completely closed.

The pathological examination of the fluid and of the membrane supported our clinical diagnosis. It was a typical hydatid cyst of the mesentery implanted into the *cul-de-sac* of Douglas.

For two full years we did not see the patient and heard only that he had returned to his work and felt well. In December, 1958, exactly two years after his first admission, he appeared again with exactly the same complaints as two years previously before his operation.

On examination it was possible to palpate a big hard mass located in the suprapubic region, directly under the scar of our previous operation. On rectal examination a large hard mass was felt occupying all of the pouch of Douglas and pressing firmly on the rectum.

Blood sedimentation rate rose to 40 in the first hour and 63 in the second, but all other laboratory findings were normal. Roentgen examinations

again revealed hydronephrosis and the findings that we have just seen, but nothing else.

From the surgical point of view; the present situation was much more complicated than the previous one, because this time the tumor was much larger, and it was impossible to define its borders. It was like a neoplasm invading all the surrounding structures. What did we have before us?

The most likely possibility was a recurrence. I have seen recurrences of operated hydatid cyst, but never appearing as a large hard infiltrating tumor.

Usually, if one is not careful enough during the operation, one can disseminate some scolices. After a time, the patient appears with a number of new cysts of varying size and localization, but one *large hard tumor* is something that I had never heard of, or seen before. I suspected something "fishy" and decided on exploration.

On December 21, the patient was operated upon again. I found a large cartilage-like mass, extending from the bladder to the rectum, completely filling the pouch of Douglas and pressing heavily on both the bladder and the rectum. There was no demarcation whatsoever between the tumor and the normal structures, and all attempts to separate the tumor from the bladder on one side, and the rectum on the other, failed miserably. I cut through the tumor also, thinking that perhaps a sponge had been left inside after marsupialization, but found nothing. It was like cutting through cartilage, with a uniform lucid, white surface. In the end, I excised a piece from the center of the tumor for biopsy and closed the abdomen.

Histological study of the biopsy specimen indicated that it was a "Fragment of fibrotic tissue with signs of subacute inflammation with plasma cells, leukocytes, and eosinophils. Conclusion: Foreign body granuloma."

It was confusing to me, and I asked our pathologist to elucidate further. In his opinion it was tissue reaction to formalin, which we had used during the previous operation. He thought that perhaps some of the formalin hadn't been aspirated, but had remained in some deep corner, as the *cul-de-sac* of Douglas for instance, and had provoked the reaction.

I had never heard of such a complication before, and started looking into books for help, but found nothing. I performed some small experiments on my patient applying solution of formalin to his skin, even injecting it intracutaneously, but produced no reaction worth mentioning, either local or general.

But in the meantime, while we were busy with the theoretical and scientific aspect of the problem, a strange thing happened to our patient. On the very second day after the operation his mild ileus disappeared, and he complained no more of the

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pressure on his bladder. On rectal examination the tumor could be felt, but was much smaller.

The patient continued to improve, and had normal daily stools. Now, what had happened? How explain the sudden regression? I knew very well that I had excised a very small part of the tumor and that this excision could not be taken seriously in relation to the large mass that remained. We checked to see if the patient had received some antibiotics or other drugs which could be responsible for the improvement. Except for the usual premedication before the operation and some analgesics after, he had received nothing.

So, after much speculation, we put forward the following theory:

The second operation was a major stress on the patient, and such a stress would release increased amounts of ACTH and, consequently, the adrenal cortex would put into circulation increased amounts of cortisone. This is a well-known process. That we can successfully treat allergic conditions or allergic inflammatory reactions with ACTH or cortisone is well established. Obviously our foreign-body granuloma belonged to that group of tissue reaction which is sensitive to ACTH or cortisone, or both, and the short operative and post-operative periods of stress, which produced increased quantities of cortisone, were sufficient to produce such improvement.

To prove our point, we started with cortisone therapy, but after a few days our patient decided that he felt well enough to go home, and all our explanations to him were of no avail. You must know that when a patient from Morocco says, "I go home," he goes home. Before he departed, we made another roentgen check-up.

This was in January, 1959. After a little more than a year, in March, 1960, he appeared again with the same all too well-known complaints of pressure on the bladder, distention of the abdomen, colicky pains, and constipation. He had had no stools without enemas.

He had enjoyed his previous good health for about six months, but thereafter his condition deteriorated slowly until all symptoms reappeared in full force. He himself had examined his abdomen and again found the suprapubic mass. He came to us complaining bitterly about the state of Israeli medicine, stating that in his native Morocco he would already have been dead two years ago, but here, because of us, he was neither fully dead nor fully alive.

His clinical examination was identical to the previous one. He was in good general condition and nothing pathological was found except for the same suprapubic hard mass, which occupied all of the lower abdomen and protruded into the ampulla recti. No borders of the tumor could be detected

as it merged with the surrounding tissues.

Hematological and serological examinations revealed normal values with the exception of an elevated number of leukocytes, an elevated number of eosinophils, and elevated blood sedimentation rate (25/48). Urea, electrolytes, proteins, sugar, cholesterol, liver function tests were again normal. Urine examination was negative. Intravenous pyelogram again demonstrated bilateral hydronephrosis due to pressure on the bladder, and barium enema an even worse picture than previously.

Based on our previous experience, we were now determined to act decisively. We started immediately with cortisone, and decided to give larger doses and for a longer period. So we began with 300 mg. daily and reduced the dosage slowly until after two weeks we continued with a maintenance dose of 75 mg. daily. Every twenty-one days he received ACTH-GEL (40 Units). His weight, blood pressure, and urine output were controlled systematically, and he was on a proper diet.

After three weeks of this treatment we noticed considerable retraction of the tumor. The protrusion about the pubis was now no bigger than a grapefruit, and on rectal examination it was difficult to feel it. An X-ray check-up clearly confirmed the improvement. Because of the evident benefit and the complete lack of side effects on our patient, we continued cortisone treatment for another two weeks, adding antibiotic therapy (aureomycin) in the last week.

When the tumor contracted to the size of a tangerine, we decided to operate and completely excised the tumor with no difficulty whatsoever. It is of interest to mention that the smaller the tumor, the more mobile it became, and in the end it was attached only to the skin. So, with an elliptical incision I excised the whole region which comprised two old scars and the underlying tumor attached to them. All around the tumor I encountered normal subcutaneous tissue, resulting in a very easy dissection.

We sent the specimen for histological examination, and received the same answer as before:

*"Gross examination:* Spherical tumor, 7 x 5 x 5 cm. in size, composed of hard whitish tissue. Tumor attached firmly to old skin scar.

*"Microscopical:* Fibrotic tissue with occasional muscle and fat cells. Imbedded in the fibrotic tissue are granulomata of the type known as foreign-body granulomata. In a few places islands of necrotic debris are to be seen, of nonspecific type. In comparison with previous biopsy, there are many fewer leukocytes and fewer eosinophils.

*"Conclusion:* Foreign-body granulomata in fibrous tissue."

The patient made an excellent recovery and roentgenological examination after the operation

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## WHAT IS YOUR DIAGNOSIS?

### Clinical Pathological Conference \*

**DAVID LITTMAN, M.D.; ENOLD DAHLQUIST, JR., M.D., AND THOMAS FORSYTHE, M.D.**

**The Discussers.** David Littman, M.D., of Boston, Massachusetts. Cardiologist, Veterans Administration Hospital, West Roxbury; Associate in Medicine, Harvard Medical School, and Lecturer in Medicine at Tufts Medical School; former President, New England Cardiovascular Society.

Enold H. Dahlquist, Jr., M.D., of Providence, Rhode Island. Assistant Pathologist, Rhode Island Hospital. Thomas Forsythe, M.D., of Providence, Rhode Island. Associate Radiologist, Rhode Island Hospital.

#### CASE SUMMARY

**RIH No. 629495**

**Male, Colored, Age 22**

THE PATIENT was well until five days before admission when he began to experience chills after being out of doors. He felt feverish late in the afternoon and became quite thirsty. The chills and fever persisted; and, in addition, he began to have a headache, malaise, anorexia, and a slight cough. Because of these symptoms he began taking some proprietary cold tablets without relief. He slept a great deal and noticed some dizziness. He began having muscular aches and pains. Three days before admission, he took a dose of Epsom salts which resulted in a loose, brown bowel movement. Following this he felt slightly better. Chills and fever persisted, however, and he began having profuse sweating with an evening temperature rise.

Further questioning elicited the information that he had, on a number of occasions, been examined by physicians for colds, fevers, and minor injuries, but on no occasion was he told that he had a heart murmur. He denied a history of scarlet fever, rheumatic fever, or infectious diseases. His activity had been unrestricted. He had been able to do heavy lifting, and had been able to climb several flights of stairs without dyspnea, chest pain or palpitation.

#### Physical Examination

Physical examination on admission revealed a well-developed and nourished young Negro adult

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male complaining of chills. Temperature 104°, respirations 20, pulse 96, blood pressure 145/20. His throat was slightly infected. Chest was clear to percussion and auscultation.

The heart was not enlarged to percussion. There was normal sinus rhythm. There was a Grade IV, precordial, high pitched, seagull systolic murmur loudest in the fourth left interspace at the sternal border with radiation to the aortic area and axilla. There was a Grade II apical, low-pitched systolic murmur. A<sup>2</sup> was diminished. There was a precordial thrill.

The liver and spleen were reported to be palpable although this was not confirmed in numerous later examinations. There were small palpable glands in the inguinal area. Examination was otherwise not remarkable. It was further noted that paradoxical pulse was not elicited and that circulation time on two attempts was 17 seconds.

#### Laboratory

Initial white count 12,500 with a differential of 74 polys, 15 lymphs, and 11 monos. Hemoglobin 13.2 grams. More than one half of polys were band forms. Micro HCT 40%. Fasting blood sugar 150. BUN 23. Urine showed one plus protein and a specific gravity of 1.023. Initial chest X-ray was negative. Hinton was negative.

During the prolonged hospitalization a number of these laboratory tests were repeated. Several urines were negative but one recorded on the 34th hospital day showed rare fine granular casts and many bacteria. White count varied between 18,100 and 5,450. Antistreptolysin titre was 833 units per cc. A subsequent test showed 150 units per cc. C reactive protein was positive. A throat culture showed moderate growth of a non-pathogenic neisseria and a few strep. viridans which had wide antibiotic sensitivity. A sputum culture showed similar organisms. A blood culture on the day of admission revealed a hemolytic staph. albus, coagulase negative, which was sensitive to a number of antibiotics. Forty subsequent blood cultures were negative, although one on the 29th hospital day yielded aerobacter aerogenes, showing some antibiotic sensitivities. A chest X-ray on the 4th hospital day showed the heart to be slightly increased in transverse diameter. Oblique view with barium

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swallow showed no specific chamber enlargement. Chest plate on the 10th hospital day showed a large homogeneous shadow obscuring the outer half of the lower  $\frac{2}{3}$  of the right lung probably due to pneumonia with accompanying effusion. The right costophrenic angle and the outer portion of the diaphragm were obscure. There appeared to be some cardiac enlargement. Another chest X-ray two days later showed resolution of the previously noted homogeneous density. On the 16th hospital day there was a rather hazy density in the lower portion of the left lung due to either pneumonitis or pulmonary infarction. Three subsequent chest plates showed no significant change although there was a gradual increase in the maximum diameter of the heart from 16.5 cm. to 26.5 cm.

Sedimentation rate on the 11th hospital day was 33mm/hour. Several others were in the same range. Eosinophil count on the 15th hospital day was zero, but was within normal limits on other occasions; one on the 32nd day was 150. Three subsequent BUN's were normal. Blood electrolytes were generally within normal limits. Prothrombin activity moderately reduced. Several sputum cultures showed mixed organisms of no particular significance. The same was true of several urine cultures. Purified protein derivative (PPD) skin test was negative. There was a drop in hemoglobin to 8.9 grams and hematocrit to 29%. These later rose to 10 grams and 32.5% after blood replacement therapy. Serological tests for four strains of influenza were negative 1/8, for the psittacosis group negative 1/16, and for Q fever negative 1/8. It was noted that the aerobacter aerogenes grown from the patient's blood was not inhibited by the patient's serum. L. E. preparation was negative. Cold hemagglutinins negative 1/4. Six electrocardiograms were obtained. The first three were within normal limits. The last three were abnormal, suggesting left ventricular enlargement and strain, and in addition some nonspecific effects.

#### *Course in Hospital*

Patient ran a febrile course throughout. During the first three days the temperature gradually dropped from levels of 103 to 105 to levels of 98 to 101, and except for occasional rises to 102 or 103, remained under 101, and for an extended period under 100. Early in the course of his hospitalization, he complained of pain in his right eye and of blurring of vision. An eye consultant found massive exudative retinopathy. The cardiac murmur varied somewhat in intensity of quality but persisted throughout. Patient was given a wide variety of medication. His antibiotic therapy included Achromycin, Streptomycin, Penicillin, Vancomycin, Mycostatin, and Chloromycetin. Other medication included Benamid, Meticorten, ACTH, and digitalis preparations.

On the 8th hospital day patient complained of shortness of breath for the first time. It was noted that there was increased intensity of P<sup>2</sup> and that the initial systolic murmur was louder. He appeared somewhat sicker. On the 11th hospital day although patient felt slightly better, dullness to percussion was noted over a fairly wide area at the right base, but no absent breath sounds. On the 12th hospital day the patient had a nosebleed with a loss of 3 to 5 ounces of blood. A bleeding point in the left nostril was cauterized. Later the same day the patient had a convulsion, became cyanotic with irregular respirations. The convulsion had started immediately following an intramuscular streptomycin injection given in the buttocks, and the question was raised as to whether there was a causal relationship between the two episodes. He was stimulated by pounding his chest and was given oxygen by catheter passed between his teeth. Patient regained consciousness, following which he was reported as having some stiffness of his neck. No localized neurological abnormalities could be found. Streptomycin was discontinued. On the 15th hospital day blotchy areas appeared on both the soles and palms and there were several small petechial spots on the tips of his fingers. No previous petechial phenomena had been noted. The heart murmurs were described as follows: There was a Grade II to III blowing diastolic murmur heard best along the left sternal border and radiating to the axilla. There was a rumbling mid-systolic murmur best heard at the apex and left sternal border. There was a short presystolic crescendo murmur leading into the first heart sound.

On the 21st day there was some evidence of neck vein dilation. At that time the venous pressure was 150, the pulse was 104, and there was distinct splitting of the second sound with apparent gallop rhythm. At this time the murmurs previously described were loud and could be heard beneath the left shoulder blade. The apical diastolic rubbing murmur was very loud and booming in quality. At this time there was slight abdominal distention. On the 22nd hospital day there was dullness of the left base and fine rales of both bases. On the 29th hospital day patient complained of a sore throat and examination revealed milky white patches consistent with monilia. This was confirmed by culture. The gradual enlargement of his heart noted in the X-ray films was observed on physical examination. On the 34th hospital day he was unable to lie flat in bed because of dyspnea. His neck veins were distended and there were coarse rales and dullness in the right base. There was no pitting edema. The venous pressure was 290. On the 38th hospital day, because of the drop in hemoglobin and hematocrit previously noted, patient was given packed red cells. Although there were periods during which

he seemed to improve temporarily, his over-all course was one of gradual deterioration. Toward the end he was described as being in "severe heart failure." He died quietly in his sleep on his 41st hospital day.

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*Doctor Littman:* I would like to check on one or two details, if I may, because there are apparent discrepancies. First of all, Dr. Dahlquist, have you the records, here?

*Dr. Dahlquist:* Dr. Goldowsky has the records.

*Dr. Littman:* Dr. Goldowsky, the initial pressure is in error, I believe.

*Dr. Goldowsky:* No, the initial pressure is not in error; it is 145/20.

*Dr. Littman:* That is correct, you say?

*Dr. Goldowsky:* Yes. Subsequently, the following day, it was 130/40.

*Dr. Littman:* That is substantially the same. In that case, I would offer the suggestion that the physical examination was either an error or that it was copied in error. There is a statement that there was a normal sinus rhythm, and a Grade IV, precordial, high pitched, seagull systolic murmur. I can understand that in a sick person, it is not too difficult to be in error regarding the timing of such a murmur. In any event, I shall assume that this was diastolic. This, I think, is rather important. If this young man had, in fact, wide-open, aortic insufficiency when first seen, the implication is that either he had had rheumatic heart disease for some time in the past, or that he developed acute insufficiency of the aortic valve.

*Dr. Dahlquist:* This is recorded as systolic.

*Dr. Littman:* Even so, I am going to assume that it was not systolic, because it makes no sense. The diastolic blood pressure of 20 makes it quite necessary to have something wrong with the aortic valve because one does not get pressures of that kind merely as a result of high fever or rapid run-off. This required insufficiency of the aortic valve and I must assume it was present.

Subsequently, a diastolic murmur is mentioned, and it would be good to know if this murmur developed during the six weeks' course.

*Dr. Goldowsky:* The notes say "seagull systolic murmur."

*Dr. Littman:* Very well. I have made the same error myself.

Also, while you are on the physical examination, Dr. Goldowsky, where were the systolic and diastolic murmurs heard, and where was the apical thrill?

*Dr. Goldowsky:* Precordial thrill.

*Dr. Littman:* Very well. This is what makes these cases puzzling and interesting, don't you think?

There are some other details which, perhaps, might be considered in the same category. There is an antistreptolysin titre of 833 units per cc. and then a subsequent test of 150 units. If this young man had rheumatic fever, and I suspect this was certainly on the list of possibilities, it would be most unusual for the antistreptolysin titre to drop from 833 to 150 during the course of the illness. I don't quite know how to interpret that.

*Dr. Goldowsky:* Those figures are correct.

*Dr. Littman:* All right. There is one more detail. I wonder when this young man received his ACTH or the other medication, including Benamid, Meticorten and the like. When did he get the ACTH and the Meticorten?

*Dr. Goldowsky:* About the 24th day of his illness.

*Dr. Littman:* Roughly, half way, or a little beyond half way in his illness. This, I think, is rather important, because if he died of rheumatic fever —

*Dr. Goldowsky:* I am sorry, but that is not correct. He was already getting it on the 24th day.

*Dr. Littman:* That is even more impressive, isn't it? Well, it is perfectly obvious, merely from a review of the therapy, the kind of thinking that the attending physicians went through.

This young man, right from the very start, obviously had a desperate illness, from which he subsequently succumbed, and it was apparent that therapy was directed against bacterial infection in his heart, with or without rheumatic fever. Those are clearly the most likely reasons for his illness.

Let us look at the possibilities. To begin with, the blood pressure of 145/20 implies disease of the aortic valve. This was either present before his illness and escaped notice by previous examiners, or developed acutely during the first few days of his illness. This is not a manifestation of subacute endocarditis. It must be considered of the acute variety, of the type that characteristically attacks the aortic valve. By definition, or at least by some definitions, an illness of this type which lasts longer than six weeks may be considered subacute rather than acute. However, I am not sure it is an important differentiation.

Of greater importance is the infecting organism and the therapy directed toward it. It would appear that this represented an acute infection with *Staphylococcus* and/or unusual *streptococcus* or *pneumococcus*, characteristically involving the aortic valve. The changing murmurs help to support such a diagnosis. Dr. Forsythe, may we look at the films at this time?

*Dr. Forsythe:* I have a series of eight A-P films of the chest, beginning with his admission film, on January 17, 1960, and extending right through to that of February 23, 1960.

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The first film was interpreted as negative, and I think I may have made the same interpretation. However, let me show you the lateral film. I would think that, in a cardiac problem, I would have to comment on the posterior border of the heart. I would think that this patient had some enlargement of the left ventricle. There is nothing further that I can see on this admission film in January.

The next film was the P-A film, taken with the oblique and lateral films, and there was no displacement or deviation of the esophagus on any of the films. Certainly, there was no change or enlargement on that series of films. The diaphragm was elevated bilaterally.

One film, a portable film, was taken apparently when he was quite ill, on the 27th. This would be, roughly, on the 10th or 11th hospital day, and this shows the large area described and interpreted as being pneumonia, and we see the sulcus almost totally obscured by fluid. Then, some two days later, we have almost total clearing of this density; I say "almost total" because I think there is some residual density here. His fluid has almost completely gone, except for a small residue in his sulcus, which is, perhaps, still here.

In the final film, it is gone. I would think that this has cleared far more quickly than I would have expected to see a pneumonia clear, in two days. I think it has cleared too much for the ordinary pulmonary infarct.

*Dr. Littman:* What are you going to call it?

*Dr. Forsythe:* I don't know the answer. I would call it pulmonary edema.

*Dr. Littman:* Lying on his right side, there?

*Dr. Forsythe:* I would go further. I think that possibly prior to the time this film was taken, yes, I think he was in failure. His vascular markings are becoming exaggerated and were persistently exaggerated for the rest of his hospital stay. I would say that he was in chronic failure all the way through.

On one film, some twelve days after he came in, he has for the first time changes in the left base. There is a density in the lower lobe, corresponding to this. His heart looks progressively enlarged. It is quite enlarged, but with somewhat amorphous contour.

There is a picture, on the final film, of a big heart. Failure? Nothing in the parenchyma of his lungs that I see.

*Dr. Littman:* The shape is not characteristic of any particular lesion.

*Dr. Forsythe:* In particular, I don't think he has pericardial effusion of any massive sort.

*Dr. Littman:* It could be consistent?

*Dr. Forsythe:* Yes.

*Dr. Littman:* I wonder if we could see the cardiotograms at the same time and get them out of the way.

(The cardiotograms were then shown on the screen. The changes were nonspecific.)

*Dr. Littman:* You have seen the chest films and the electrocardiograms. These confirm our impression of desperate heart disease in a young person who goes into congestive failure and dies. The diagnosis of active rheumatic fever is one that must be ruled out, no matter what else, and it is the one which I shall work on, to begin with.

There are a good many details about this young man which suggest that rheumatic fever was, in fact, present. On the other hand, if he had the juvenile form of rheumatic fever which sometimes ends fatally, it would be extraordinary that he should not have joint involvement.

On admission, he had aches and pains. At no time were the joints specifically mentioned. In my personal experience, I don't think I have ever seen a fatal rheumatic carditis in the absence of active joints or active exudative pan-carditis, pericarditis and the like. This, apparently, was not present.

In a similar fashion, I don't believe I have ever seen a case of fatal rheumatic fever, in which there wasn't more abnormality of the electrocardiogram, particularly of heart block.

As evidence for rheumatic fever, we have a young man in failure, together with a very high antistreptolysin titre. He had evidence of a brisk anemia, such as is seen in rheumatic fever, and some though not great renal involvement.

On the other hand, the possibility of bacterial invasion of his heart is a strong one. Here, too, of course, we would like to have a positive diagnosis. We would like to have a positive blood culture. It is quite possible that the first culture in which a staphylococcus was discovered may have been a clue to his infection. He may have had a staphylococcus bacteremia and staphylococcus endocarditis. It would have been nice to have had a single confirmation. It did not turn up. It was likely this boy was so ill that he received treatment on the day of admission, and it may have been impossible to get positive cultures thereafter, even though the organism may have been growing in his heart.

There are a few other conditions which might simulate the findings here, and I shall review them as they come up. For example, one may have a nonbacterial endocarditis, with disseminated lupus, and I notice that this, too, was considered, at least insofar as tests were made for this. But, it is unusual to have this type of disease in a male. I don't believe I have ever seen it, and in the reported cases about 90 per cent are young women.

Did this boy have luetic heart disease? I have seen rather rapid progression and death in patients with aortic insufficiency due to syphilis. I have also seen this in the absence of a positive serology. This can happen, and I suppose that it is a possibility.

It does, however, not begin to account for the febrile course. There is no reason why this patient should have luetic heart disease with a persistent fever.

Did this young fellow have something like sickle cell anemia? This, too, may simulate active rheumatic fever, together with joints, the development of murmurs, and anemia; but, I have never seen one of these that came to such an end in so brief a time. This patient is not reported to have had scars or ulcers on his legs, or any of the other stigmata of this disorder.

On rare occasions diphtheritic myocarditis may mimic a case like this, with murmurs, dilation of the heart, and a fatal outcome.

It seems that we are down to the two conditions I mentioned earlier, bacterial endocarditis and rheumatic fever. And frankly, at this point, I don't know whether I can rule out or rule in either, except for their statistical likelihood. If this is bacterial endocarditis, I will have to consider that it is an acute type, because, in the absence of evidence of valvular disease in the past, it is very unlikely that the subacute variety would occur in an otherwise normal heart.

I toyed with the possibility that he was a morphine addict, and might have infected himself by an intravenous injection. This isn't very likely, and as you probably know, infections acquired in this manner usually involve the tricuspid valve.

A word, by the way, about the findings. To get back to the original murmur, we have a seagull murmur; this is the description usually used to describe diastolic murmurs of aortic valve origin, which are said to occur with a ruptured or a displaced cusp. It is also seen in acute endocarditis. If he does, in fact, have a wide open aortic insufficiency, this can account for all the other murmurs without the necessity of involving other valves. As you know, this may include an apical murmur which is indistinguishable from the murmur of mitral stenosis.

Dr. Forsythe believes, in retrospect, that the findings of the chest film were likely those of pulmonary edema, rather than the findings of pneumonitis. The presence of pneumonitis made me swing a little towards rheumatic fever as the more likely diagnosis, because in a desperate and fatal case, rheumatic pneumonitis is sometimes seen. But, it cleared too fast. I agree that this is more likely pulmonary edema.

I offer the suggestion that this young man was in failure when first seen, and I should like to comment on the circulation time, which was 17 seconds on two tries. In young people, circulation time should be around 12 to 15 seconds, and in normal, young people with fever, around 10 or 12 seconds. Hence a determination of 17 seconds suggests to

me he was already in trouble when first seen.

The fact that he had a BUN of 23 on admission suggests that he was probably dehydrated, although in bacterial endocarditis renal involvement is rather common.

I am very much disturbed, however, by the fact of the subsequent urines being negative. I find that it is extraordinarily difficult to picture a fatal endocarditis or, for that matter, a fatal rheumatic valvulitis, without red cells in the urine. I don't know how to interpret this, or the curious drop in the antistreptolysin if, in fact, this boy did have rheumatic fever.

I do not know what to do with the unilateral disease of the eye. You will recall that mention was made of extensive retinopathy of one eye. I cannot explain it, except on the basis of embolic disease, which might involve one eye.

In a similar fashion, it seems likely that the convulsion was an embolic phenomenon though it left no localizing residuum.

The spots on his palms and on his feet suggest Janeway spots. These, as you know, are seen in bacterial endocarditis; they are flat, erythematous areas on the palms of the hand and the soles of the feet. He also apparently had petechial manifestations on his finger tips.

I am sorry to subject you to this soul-searching, but I suspect that I am going through the same process you did when you had him, and I will have to revert to the diagnosis of bacterial endocarditis, probably acute, possibly on the basis of a congenital bicuspid valve, which is often the site of such disease, with the second possibility of rheumatic fever.

### **Discussion**

IRVING A. BECK, M.D., President,  
Providence Medical Association

We are supposed to have next a general discussion by the audience.

QUESTION: Why did the sedimentation rate stay at 33? Why didn't it vary?

Dr. Littman: I don't know; I am sure it must have varied some because, as you know, if you take several sedimentation rates on the same day, they will vary. The rapid sedimentation rate, of course, is likely in either disease, whether it is rheumatism or bacterial endocarditis.

QUESTION: Do you think that you would have to postulate a ruptured valve to account for all the changing murmurs? That is question 1.

Question 2 is this. The location of this precordial thrill, if it were at the apex, would you postulate rupture of a papillary muscle?

Perhaps that could explain the whole thing, and I have seen this sort of thing. However, it would not explain the wide pulse pressure. So I want to know if you think the location of that thrill would

*continued on next page*

be a pretty important factor in diagnosis, and also if you think there was probably a ruptured cusp.

*Dr. Littman:* Dr. Burgess, I couldn't agree more about the location; it is very important. As you know, an apical thrill at systole might suggest a rupture of a papillary muscle or a corda tendinae. Sometimes, the thrill can be felt around at the back. But this was described as precordial, and otherwise not localized. I don't know that we have to postulate a ruptured cusp because although the course was relatively brief, it was not abrupt, and ordinarily one would expect a rather sudden change in findings if a cusp actually ruptured or perforated.

The ones I have seen could be timed with an abrupt and gross alteration in the murmurs. Again, most such cases die rather promptly thereafter. But here, as a matter of fact, I think we can plot a continuous course from admission until the day he died. I think he may well have a perforation of a cusp, although this could have been small initially and grown larger.

I am intrigued with the possibility of the bicuspid aortic valve as being the point of origin. As you know, this occurs, normally about one per cent of the time, in otherwise normal individuals, but is the point of infection in a greater number than its incidence would lead one to believe. I have seen a rather considerable number, at autopsy, of patients who died of bacterial endocarditis who did, in fact, have a congenital bicuspid valve.

**QUESTION:** I should like to make one or two remarks. I think I know the answer, so that I shall confine what I have to say to ante-mortem observations.

I want to confirm and support Dr. Littman's reasoning as to the murmurs. We saw him on several occasions, and he had a cooing, diastolic murmur. I believe the observation recorded was the house officer's. We were able to improve the intern's timing, I think, by the carotid pulse, even if he failed to change his note. He did have a diastolic murmur, also interpreted as an Austin-Flint. He did not have a loud M-1. So that I would support your inferences, without the written word.

I should like to make another comment here, which is really a dramatic episode, and one I hadn't seen before. He rather suddenly became extremely edematous, hemorrhagic, and the retina was completely disorganized. It looked as though he was going to lose his eye, and that was the reason he was begun on the ACTH and meticorten, not for rheumatic fever. The response to therapy was dramatic and his eye was normal, then, for ten days.

*Dr. Littman:* In any event, it didn't help the rest of the situation, which makes me believe that rheumatic fever is rather less likely. I think that one can expect some change in the progress of fulminating rheumatic fever after the administration of meticorten and ACTH.

### *Dr. Littman's Diagnosis*

1. Acute Bacterial Endocarditis of Aortic Valve.
2. Possible Bicuspid Aortic Valve.
3. Rupture of Aortic Valve Cusp.
4. Cardiac Failure.

\* \* \*

### *Pathological Discussion*

*Dr. Dahlquist:* I should like to congratulate Dr. Littman on his handling of this pathologic "hooker." It probably represents an entity undiagnosable prior to autopsy. We have chosen this case with an eye toward its educational value as well as its rarity.

The heart weighed 430 grams, and showed marked dilatation. There was a pericardial effusion amounting to 300 cc. The tricuspid, pulmonic and mitral valves were completely normal. We might show the first slide. This is the aortic valve. The posterior cusp is normal. The left cusp, which has been bisected in opening the valve ring, is also normal.

The orifices of the right and left coronary arteries are normal in size and position. At this point there is an additional orifice within, but at the base of, and near the left margin of, the sinus of Valsalva of the right coronary cusp which leads into an aneurysm. The right cusp has ruptured along the margin of this aneurysmal orifice. There is a vegetation on this right cusp along its ruptured edge. This vegetation is less than 1 cm. in diameter, red-brown, friable, and covered with fresh clot. The left half of the right cusp is of normal appearance.

The next view shows us, at the expense of covering up the vegetation a bit, a portion of the cavity of this aneurysm. It extended anteriorly, butting directly against the pulmonary artery, measuring 2.5 cm. in length and 1.5 cm. in diameter. As you can see, there is no clot or vegetation within it, the inner surface is smooth and there is no point of rupture.

This next view is a diagram reproduced from a text on congenital heart disease.<sup>1</sup> This as you can see approximates ours in location, but has ruptured into the right ventricle.

I should point out perhaps now that there is a very nice anatomic survey of this condition by Jesse Edwards in 1957,<sup>2</sup> and that for the purposes of clinical and pathologic classification of aneurysms of the sinuses of Valsalva, he arbitrarily divides each cusp into thirds, and therefore proposes nine different sites in which this aneurysm may occur and possibly rupture, each one of these nine producing on rupture, because of the complex anatomy in this area, a different clinical syndrome. These aneurysms are usually asymptomatic until such time as they may rupture.

We present a diagrammatic sketch of our case. The orifice and the aneurysmal cavity are demon-

stated. The aneurysm is actually superior to the musculature of the interventricular septum; it abuts directly against the pulmonary artery at one point.

This next view is a microscopic picture of the myocardium. There were EKG changes suggestive, I believe, of myocarditis, but from the evidence in all sections, it is hard to see how such tiny foci, so few in number as we have here, could cause any such EKG changes. Each focus reveals small numbers of lymphocytes and polymorphonuclears in the interstitial tissue only. The myocardial fibers, in general, are normal; there is no apparent necrosis.

The next view shows a section of the lungs, and you can see the rather marked chronic congestion with large numbers of hemosiderin-laden macrophages in the alveolar spaces. The lungs did show some edema also. Practically all the other organs were normal with the exception of the liver which weighed 3000 grams and was congested. The spleen was not significantly enlarged.

We now show a microscopic picture of the aneurysm wall. There is a little bit of elastic tissue in it, but it is composed principally of a dense collagenous fibrous tissue. This again shows the wall of the aneurysm abutting against the muscle in the interventricular septum.

In a microscopic picture of the base of the vegetation we notice the vascularity at the base. As the tip of the vegetation is approached, there is less and less cellularity, and the next section shows masses of fibrin only, with more recent blood clot, at the tip.

One view presents a gram stain of the vegetation, showing the masses of bacteria scattered in the deeper layers of the fibrin. These bacteria do not reach the surface at any point, which is typical.

The cultures of these vegetations taken at autopsy were inexplicably negative. We do not therefore have any definitive cultures in this case. However, careful examination of this gram stain reveals diplococcal forms like this, resembling streptococcus which are slightly elongated. These also simulate short chains in some areas, which again resemble streptococcus, but the important finding is this diplococcal form which we feel is quite typical of the streptococcus.

We show a diagram reproduced from the second article by Jesse Edwards,<sup>3</sup> and it indicates what is considered to be the basic defect in the congenital type of aneurysm of the sinus of Valsalva. The first view demonstrates the normal in a vertical section through the aorta, aortic valve and the membranous portion of the interventricular septum. The important relationship, you will notice, is here, the joining of the aorta and the membranous septum.

In the next view, we see a similar plane, with an

obvious failure of the aorta to unite with the membranous septum, and the formation of an aneurysm at the point of normal fusion.

We feel that the aneurysm demonstrated in this case is an aneurysm of the sinus of Valsalva, congenital in type. We feel it to be congenital because of its dense collagenous wall. Sheldon and Golden<sup>4</sup> demonstrated, in cases of acute bacterial endocarditis, the presence of abscesses of the valve rings of the heart. They followed several cases for weeks and even months, and at autopsy in no case did any of these abscess walls show to any degree the organization and collagenation that is present in our case. In every one of their cases, the wall is composed of loose granulation tissue.

Therefore, I think the aneurysm in our case has been present for an extremely long time. Its collagenous wall and its anatomic location both substantiate its classification as a congenital aneurysm of the sinus of Valsalva.

There may have been originally a slight deformity also of the right cusp of the aortic valve, associated with the aneurysm; or perhaps abnormal eddying of blood caused by this particular aneurysm may have damaged the valve, with subsequent bacterial endocarditis.

Interestingly enough, most of these aneurysms are brought to light only by rupture, through development of a picture almost exactly like the one we have in this case; in other words, a relatively young man, between 20 and 30, developing sudden heart failure, with the presence of a very harsh or a loud murmur that has never been heard before. This, I repeat, is the picture typically seen with rupture of one of these aneurysms and duplicated in our case by endocarditis and valve rupture.

So, we postulate that there was a congenital aneurysm of the sinus of Valsalva which influenced the development of a bacterial endocarditis on the aortic valve, with a rupture of the involved cusp, intractable cardiac failure, and death. Quite probably, the etiologic agent was a streptococcus, although we cannot prove it definitely.

\* \* \*

*President Beck:* Dr. Littman, do you have any comments, now that you know the answer?

*Dr. Littman:* I don't really feel too badly. Ordinarily, the diagnosis of a ruptured aneurysm of the sinus of Valsalva is made on the development of the continuous murmur; in fact, you have a left or right shunt, which makes the various types. Of course, he did not rupture, and one would not have expected a murmur of that kind. His murmur, in fact, was due to the valvulitis, or the bacteria on the valve and the subsequent perforation thereof, which produced the aortic insufficiency.

I was practically not aware that a congenital aneurysm of the sinus of Valsalva is at all a com-

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## SUBLUXATION OF THE HEAD OF THE RADIUS ("PULLED ELBOW") IN CHILDREN

CAROLL M. SILVER, M.D., AND STANLEY D. SIMON, M.D.

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**P**ULLED ELBOW is an injury which occurs in young children and is characteristically dramatic in its onset, and both startling and alarming to the parents. The authors have seen and treated approximately twenty cases each year in an active orthopedic practice, and have been impressed by the frequency with which this condition is misdiagnosed. The treatment is simple and effective. This presentation is offered in order to help make the clinical entity more commonly appreciated.

*Review of Literature:* Van Arsdale,<sup>1</sup> in 1889, gave the first thorough review of the condition in the American literature, reporting a series of one hundred cases. He stated that Hippocrates and Celsus had referred to this injury, and credited Fournier with the first accurate description in 1671.

In 1916, Stone<sup>2</sup> carried out experiments on twelve cadaver arms, in which the bones were practically free of muscles but the ligaments were intact. Subluxation of the head of the radius was produced in six extremities by forcible traction on the extended arm; the annular ligament slipped over the radial head when the hand was pronated.

Boyette and London,<sup>3</sup> in 1948, emphasized that this was a common injury in young children, and stated that this was "a pediatric problem."

Magill and Aitken<sup>4</sup> analyzed 3,390 children, ten years and younger, seen in the Boston City Hospital Accident Room in a two-year period. They found an incidence of 3 per cent of "pulled elbows" in children eight years of age and younger, and concluded that this was a relatively common injury in young children. No cases were observed over the age of eight.

Green and Gay,<sup>5</sup> Beegel,<sup>6</sup> Salkind,<sup>7</sup> Sweetnam<sup>8</sup> and Hart<sup>9</sup> reported small series of cases and described the typical picture of this injury.

In 1959, Broadhurst and Buhr<sup>10</sup> reviewed 139 cases of upper limb injuries in children under eight

in England. They found an incidence of 15 per cent of "pulled elbows" in this series, and concluded that this injury is more common than fractures of the humerus or clavicle in young children.

*Anatomical Factors:* The head of the radius after birth is represented by a circular disk of cartilage whose ossification center does not appear until the fifth year of life. The head of the radius is surrounded by an annular ligament which retains the radial head in contact with the radial notch of the ulna. This allows rotation of the radial head which permits pronation and supination of the forearm. The diameter of the radial head is no larger than the proximal shaft until the age of five years.

Because of the small size of the cartilaginous head at this early age, sudden extension and traction of the forearm may cause subluxation of the radial head out of the annular ligament, producing immediate disability.

Characteristically therefore, this injury occurs from the ages of one to five years in our experience and that of other observers, prior to the formation of the bony center of ossification in the radial head. It may occur less frequently up to the age of eight and rarely at nine, but the average age noted by most writers is two and one-half years.<sup>1,4,9,10</sup>

*Typical Clinical Picture:* A young child under the age of five years is swung up into the air with arms extended, by a parent or adult relative, or is pulled sharply by the hand and wrist because he is lagging behind. Frequently the adult will hear a snap or feel a snapping sensation somewhere in the child's upper extremity and immediately afterward the child is in acute distress. The youngster cries, the upper extremity is held limply at the side of the body, elbow slightly flexed and forearm in pronation; the child refuses to use this extremity or to permit it to be handled.

Several hours later or a day later, the child is brought to the doctor, the upper extremity still limp and the child obviously in pain.

This can be particularly alarming during the summer months, when the question of poliomyelitis is uppermost in the parent's mind.

X rays of the elbow frequently show no gross deformities, although if comparison X rays are made with the opposite elbow, careful observation

may occasionally reveal a slight anterior displacement of the neck of the involved radius in relation to the lateral humeral condyle. As a rule, however, bony deformity is not noted. The X ray is valuable in that it also will rule out other bone injuries or anomalies.

The fingers will be moved on stimulation and no evidence of sensory loss or paralysis of the radial, median or ulnar nerves is noted. Tenderness over the radial head may be elicited. The child resents having the extremity stimulated, and if the clinical history of a pull of the extremity or a swinging-upward of the child by the forearms is not elicited, the picture may be a confusing one to the uninitiated examiner.

**Treatment:** As stated initially, the treatment is simple and effective. Without anesthesia, the elbow is flexed to a right angle by the examiner, and the forearm is turned firmly into supination. Simultaneous pressure may be made over the radial head, but is not essential. A click or snap is felt almost routinely by the examiner and immediately afterward the forearm can be supinated and pronated with ease and without pain. The upper extremity is immobilized with the elbow in flexion under the child's shirt or with a small sling for a period of twenty-four hours, after which no further immobilization is necessary.

The child's crying and distress cease almost immediately, and the treatment is as dramatic as the initial occurrence of the injury.

The authors have not seen a recurrence of this injury in any youngster to date. Occasional recurrences have been reported by some writers.

### SUMMARY

Subluxation of the head of the radius or "pulled elbow" is an injury which occurs not infrequently in children below the age of five years, for anatomical reasons which are described. This clinical entity is not as widely recognized as it should be, and its treatment is simple and effective. This report is offered to make the injury and its simple treatment better known to the general practitioner and pediatrician, who most frequently see the child after the occurrence of the injury.

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### MANAGEMENT OF HYDATID CYST WITH REPORT OF UNUSUAL COMPLICATION

*concluded from page 764*

(May, 1960), and again two months later (July, 1960) showed normal barium filling of the rectum and normal evacuation and, on lateral view, showed complete disappearance of the tumor between the bladder and the rectum.

#### Discussion

In discussing this case we obviously must accept the fact that it was a foreign-body granuloma, but I cannot readily accept the explanation that formalin was responsible for it.

To my mind it must have been a fragment of the dead germinative membrane of a hydatid cyst, which remained in some obscure corner after marsupialization. The presence of eosinophils and of necrotic nonspecific debris is, in my opinion, sufficient evidence.

It must have been a dead fragment of germinative membrane, because otherwise we would see the structures of a new recurrent hydatid cyst, and not those of a foreign body granuloma.

### WHAT IS YOUR DIAGNOSIS?

*concluded from page 771*

mon point of infection; I am glad to have learned that. I will be on the lookout for it from here on.

**Dr. Dahlquist:** In this case, we believe the aneurysm contributed to the development of the bacterial endocarditis.

**Dr. Littman:** I have never encountered it before.

#### Anatomic Diagnosis

1. Congenital Aneurysm of the Sinus of Valsalva.
2. Acute Bacterial Endocarditis, Aortic Valve, with Rupture of Cusp.
3. Cardiac Failure.

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## INFLUENZA IMMUNIZATION \*

Statement by LEROY E. BURNEY, *Surgeon General,*  
United States Public Health Service

TWO OUTBREAKS of influenza swept the United States in the fall of 1957 and the winter of 1958, resulting in 60,000 more deaths than would be expected under normal conditions. There were, in addition, more than 26,000 excess deaths during the first three months of 1960 which also were considered to be the result of influenza.

These departures from the usually predictable norms prompted the Surgeon General's Advisory Committee on Influenza Research to analyze the cause and to seek measures to prevent such an occurrence in the future.

The committee found that a new antigenic variant, the Asian strain, because of its widespread introduction and the general lack of resistance to it, was the direct cause of the excess number of deaths, not only in the total population but most markedly among the chronically ill, the aged, and pregnant women. As a result of these findings, the Public Health Service is urging a continuing program to protect these high-risk groups in order to prevent a recurrence of this excess mortality.

The high-risk groups who contribute most to the excess deaths and who the Public Health Service believes should be routinely immunized each year are:

1. Persons of all ages who suffer from chronic debilitating disease, in particular: (a) rheumatic heart disease, especially mitral stenosis; (b) other cardiovascular diseases, such as arteriosclerotic heart disease or hypertension—especially patients with evidence of frank or incipient insufficiency; (c) chronic bronchopulmonary disease, for ex-

ample, chronic asthma, chronic bronchitis, bronchiectasis, pulmonary fibrosis, pulmonary emphysema, or pulmonary tuberculosis; (d) diabetes mellitus; (e) Addison's disease.

2. Pregnant women.

3. All persons 65 years or older.

The adult dosage recommended by the advisory committee for initial immunization is 1.0 cc. (500 cca units) of polyvalent vaccine, administered subcutaneously on two occasions separated by two or more months. Preferably, the first dose would be given no later than September 1 and the second no later than November 1. Persons previously immunized with polyvalent vaccine should be reinoculated with a single booster dose of 1.0 cc. subcutaneously each fall, prior to November 1. The only contraindication to vaccination would be a history of food allergy to eggs or chicken or a prior history of allergic reaction to an egg-produced vaccine, such as the commercial influenza product.

The time to start such a program is before the onset of the influenza season this fall. In the past, influenza vaccination has been sparse and sporadic, and primarily in response to an epidemic or the threat of an epidemic. The unpredictability of recurrence of influenza and its continued endemic occurrence are well known. Therefore, the Public Health Service strongly recommends that immunization of these high-risk groups be started now and continued annually, regardless of the predicted incidence of influenza for specific years.

The members of the Surgeon General's Advisory Committee on Influenza Research are: Colin M. MacLeod, M.D., chairman, University of Pennsylvania; Fred M. Davenport, M.D., University of Michigan; Morris Schaeffer, M.D., bureau of laboratories of the City of New York Health Department; George Burch, M.D., Tulane University; Dorland J. Davis, M.D., National Institute of Allergy and Infectious Diseases, Public Health Service; Thomas F. Sellers, M.D., Georgia State Department of Health; and Glenn S. Usher, M.D., Communicable Disease Center, Public Health Service.

### DID YOU KNOW?

#### SCHOOL ACCIDENT FACTS

- The most dangerous areas are playground and gymnasium, where 64 per cent of accidents on school property occur.
- The most dangerous hours are the first part of the school day, 68 per cent of accidents taking place in the morning and at noontime.
- Boys are involved in 65 per cent of school accidents.
- Forty per cent of all school accidents result in wounds.
- No absences are incurred in 71 per cent of school accidents.

\*Reproduced from Public Health Reports, Public Health Service, United States Department of Health, Education and Welfare. Vol. 75, No. 10, p. 944, October, 1960.

# Editorials

## THE EDITOR

**I**N CHOOSING Doctor Seebert J. Goldowsky as editor-in-chief of this JOURNAL, the Rhode Island Medical Society has continued its tradition of placing at the head of its official publication a man who is, in the highest sense, a scholar. In electing him, the Society makes it clear that, in the judgment of its members, there is no one else as well fitted to carry on the tradition of the classical touch that was so well exemplified by the writings and, indeed, in the conversation of his distinguished predecessor, Doctor John E. Donley. When we consider the years of effort contributed by him and by such men as Albert H. Miller, who raised the JOURNAL to a high plane, and Peter Pineo Chase,

who carried it on with keen insight and friendly humor, we realize that the editor-in-chief must be a man who is sensitive and clear sighted, who is not afraid to speak his mind and can do so with clarity, wisdom and finesse. Such a man is Doctor Goldowsky.

Both Doctor Chase and Doctor Donley held him in high regard and would have been deeply gratified could they have known that he was to succeed them. It is a pleasure to realize that our JOURNAL will continue its work and discharge its duties "with dignity and reputation."

ALEX M. BURGESS, M.D., Chairman  
Publications Committee

## CO-OPERATIVE CLINICAL STUDIES

**I**N THE September, 1960, issue of SURGERY, George E. Moore, M.D. and PH.D., a general surgeon, and brilliant and intense director of the Roswell Park Memorial Institute for cancer research at Buffalo, New York, makes an eloquent, logical, and effective plea for controlled co-operative clinical trials. He points out that all surgeons are interested in a rapid and valid assessment of the effectiveness of surgical procedures and of various adjuvant measures. Most surgical reports comprise a compilation of patients treated by an individual surgeon or group of surgeons representing a single clinic. The disadvantages of such reports are as follows:

"1. The spectrum of patients being treated is usually determined by the reputation of the surgeon or surgical group, the type of hospital, the relationship of the hospital to the community, and the presence or absence of nearby teaching hospitals, public hospitals, and clinics.

"2. The patients included in such studies usually have been treated over a period of years until an adequate number of patients has accumulated for a report. During the span of time covered by the report, the supervisory personnel and resident staff will have changed, numerous new drugs will have been introduced, and the changing fashions of surgery may have modified the treatment employed. Despite these changing

conditions, all cases are included and reported as a 'homogeneous' group.

"3. Definitions of operability, resectability, mortality rates, and survival are not completely described and therefore may vary from those of the same terms or similar ones used by other authors.

"4. Major variations in operative procedure may occur within the series being reported, because of the surgeon's firm belief that patients must be considered on an individual basis. Unfortunately, such individual consideration is most often based on an individual prejudice of the moment.

"5. Allocation of patients to treatment categories is often skewed by factors affecting prognosis. For example, patients with advanced lesions may be withheld from a new treatment series because the surgeon fears complications.

"6. Unless all patients in the study group and the comparison group have been followed according to a well-defined plan and with equal attention, the data regarding recovery progress, complications, and disease recurrence will not be comparable."

A careful reading of these criteria furnishes an excellent guide to the unwary reader for evaluating the worth of a clinical report. Moore points out that the acceptance of a new operation or adjuvant

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often parallels the reputation of the surgeon making the report. "There are," he points out, "examples of ill-conceived and unevaluated procedures which have been adopted by hundreds, even thousands, of surgeons following the presentation of an intriguing paper." This sad truth is all too self-evident. He further points out that the use of random and double-blind methods will not validate an otherwise poorly conceived and poorly executed clinical investigation.

Co-operative and controlled clinical trials, although not without pitfalls, nevertheless offer an excellent method for prompt and accurate evaluation of new techniques. Such co-operative investigations should include these safeguards:

- "1. Provision of an adequate number of patients with minimal change of selection that would affect evaluation.
- "2. The use of an adequate experimental design with provision of randomized therapy, double-blind control of therapy, and statistical evaluation of results, if necessary.
- "3. Completion of the study in a period during which the smallest number of new variables are apt to be introduced.
- "4. Exposure of a minimal number of patients

to the possible toxicity of a new drug or to the possible adverse effects of a modified therapeutic procedure.

"5. Determination of the efficacy of a new diagnostic or therapeutic procedure in the shortest possible time, thus making its advantages available to all patients as quickly as possible."

This new co-operative approach has already gained some acceptance and has been used for drug evaluation by the National Cancer Institute. There are other instances where this method has been used with some success. A joint study in several Veterans Administration hospitals with random controls seems to have proved that there is no difference in survival following operations for cancer of the lung, colon or stomach, whether or not adjuvant chemotherapy with presently available drugs is used. Another joint study in seventeen hospitals by Ian MacDonald, sponsored by the American College of Surgeons and the American College of Physicians, seems to have proved that the results of adrenalectomy and hypophysectomy in metastatic breast carcinoma are practically identical in every respect. Such studies seem to have the ring of authenticity. We look forward to many more.

## WHY CHOOSE MEDICINE?

IT USUALLY DOES NOT TAKE long for a medical student to come to the conclusion that he couldn't possibly have considered any career other than medicine. From the very outset the work is fascinating and as the months and years go by it is continually more and more rewarding. Often we hear the criticism from laymen that it takes so many years for the young doctor to prepare for his life's work that he has almost reached middle age before he starts. This is not true. Although there are plans being developed to cut the years of formal training in college and medical school to six or seven, even with eight as is usual at present, the average American graduate starts his life's work before he leaves the medical school. Interns and residents actually are doing their life work in their years of hospital training, and doing a most interesting part of it.

It is true that the members of the house staffs of our hospitals, while engaging in practice under supervision, and everyday learning and perfecting themselves, are also applying the latest and most effective techniques of diagnosis and treatment and still more important, they are learning how to deal with sick people. They are practicing both the science and the art. At the same time they are finding out what field of medical work is best suited to their tastes and abilities.

After participating in the three great phases of the work—service, teaching and research, with all of which he will gain familiarity, the intern and resident can determine, usually without difficulty, where he fits and can plan the remainder of his career. Even in private practice in a small town there will be things to investigate and people to teach, but here the personal side, the application of the art of medicine, will be his principal concern. There is nothing more rewarding.

As everyone knows scientific medicine has shown such advances that human life has been greatly extended, but human problems are as important as ever. The need that a person has for an understanding and sympathetic adviser who knows his medicine and can give reliable counsel and accurate care is as great as ever.

With the opportunity for a most satisfying career that is offered by the life of a physician it is not easy to explain why the number of applicants to medical school has shown a relative decrease in the past few years. It may be that applied science in the engineering field, with its promise of early financial security has such an attractive aspect that students with a definite desire to do scientific work are drawn to it. It may well lead to early security, but in the long run, in the later years of life, it seems

to offer less. It is hard to imagine a field of work in which there is greater possibility to contribute to human welfare than in medicine. This is true both in the abstract sense by increasing knowledge which will improve the health of people generally, and in a very concrete manner by applying to individuals scientific techniques and human understanding for the relief of their suffering and the extension of worthwhile human lives.

### AIDING THE AGED

**N**ow that the political air has been cleared it would appear that some serious reflection is in order on the question of aid to the aged which has been bandied from one extreme to the other for the past year as aspirants for governmental office have sought to win support for their individual plans, and at the same time win votes to continue themselves in office.

The federal legislation enacted in August specifically states that the appropriation to aid the states help the aged with medical costs is for the purpose

"(b) of enabling each state, as far as practicable, under the conditions in such state, to furnish medical assistance on behalf of aged individuals who are not recipients of old-age assistance but whose income and resources are insufficient to meet the costs of necessary medical services. . . ."

In all the furor this fall the politicians have promised all things to all persons over the age of sixty-five. The Congress did not state or even imply that *all* persons over the age sixty-five should automatically qualify for assistance. Only those not receiving old-age help, and those with limited income and resources to meet the costs of *necessary* medical services, were to be aided.

Eligibility for assistance must necessarily depend upon the recipient meeting definite criteria of need. The cry of some politicians that a means test for aid borders on a disgrace is ridiculous. If the aged are to be protected, some definite standards must be developed and made effective. The Veterans Administration requires a means test, and the method of such a check is an accepted part of many federal programs, such as assistance to the blind, small business loans, aid to permanently disabled, and old-age assistance. It is also utilized at the state level for state-sponsored programs.

Another fallacy that needs to be dispelled is the one that all, or even a large proportion of persons

Besides interpreting medical facts to his patients and correcting the dangerous fallacies that are inherent in the medical information that reaches the public through the press in ill-advised articles and advertisements the doctor now has another duty. It is this. By precept and example he must tell the young men and women of college age of the wonderful opportunities that lie ahead for the student of medicine and show them his happiness and pride in his life as a doctor.

over the age sixty-five are financially unable to provide medical care for themselves by their own resources or with aid from their families. The Rhode Island surveys on this question clearly refute any such generalization.

As the Society's Committees on Public Welfare and Aging reported to the House of Delegates, the financial picture also warrants a long look before we rush to Washington, hat in hand, for a handout. The 200 million dollar tax to meet the federal subsidy will take an additional 1 million dollars out of Rhode Island. To get the federal subsidy of \$1,381,000 offered to this state, we would have to put up state funds of \$896,000. Thus, Rhode Island pays out \$1,896,000 in tax money to get back \$1,381,000—a loss of \$515,000!

In addition, we would be committed to follow the rules and regulations of the federal government, whatever they might be, in the development of bureaucratic theories for the use of the funds.

Would it not be far more reasonable, as our committees suggest, to develop an exclusive state-operated program, utilizing such state funds as may from time to time be made available, and to make our own state rules and regulations to guarantee the most efficient and effective program of medical aid to those over the age sixty-five who are in real need? Would not such a program carried on during 1961 with state funds alone give us a far more accurate and realistic knowledge of the medical needs locally, and thereby enable Rhode Island to chart its future aged care medical plans?

As the Rhode Island report to be made to the White House Conference on Aging next month clearly points out (see page 784), health and medical care is but one of the problems facing the older age person. Employment, income maintenance, inflation, housing, education, family life, social services, and utilization of free time are vital factors that must be considered also.

### EFFORT, OCCUPATION, AND CORONARY OCCLUSION

**I**N A RECENT STUDY of some 2,600 cases of coronary occlusion which were "observed and carefully documented" by Doctor Arthur M. Master

and his co-workers during the last thirty-five years, several impressive points are made.\*

Doctor Master presents evidence that effort and

*concluded on next page*

occupation "are not factors in coronary occlusion," and he makes the point that coronary thrombosis is not a doctor's disease, contrary to the popular superstition to that effect. Also, according to Doctor Master, stress and strain are not chief among the causes of coronary occlusion.

However, Doctor Master makes it sharply clear that he is not writing about coronary insufficiency, but about coronary occlusion. In coronary insufficiency, stress and strain are certainly factors working on the damaged coronary vascular tree—but in people with normal coronary arteries evidently "hard work never hurts anybody."

Among other aspects of this wide subject, the findings of Doctor Master will help considerably in the interpretation of Workmen's Compensation laws and in insurance problems.

In these days of tremendous publicity about

research into the cause of arteriosclerotic vascular disease, with the emphasis on diet, cholesterol, and other tangible, and sometimes intangible substances, it is daily promised that the fabulous *break-through* is just around the corner. Perhaps so. But while we are waiting to turn that corner, it is good to study Doctor Master's excellent paper about some of the many clinical problems involved in coronary artery disease, and about some of the significant clinical questions he has helped to answer. Once again we are reminded that clinical experience and background are of the greatest importance in the care of the individual, and it is the care of the individual, of course, to which all aspects of medicine are directed.

\*Master, Arthur M.: The Role of Effort and Occupation (Including Physicians) in Coronary Occlusion, J.A.M.A., 174:942, 1960.

### A DOUBLE-BLIND FRANASTAN

AS THE first discussant of this excellent paper, I should like to congratulate the essayist for this superb double-blind franastan with a ploy-ploy. A discusser is always at a disadvantage because he can't see quite as well after a double-blind ploy, particularly when the methodology is statistically significant. The significance of a statistic depends upon the number of variables divided by the number of normal controls. This can always be seduced by a transducer on a percentile basis, providing the co-ordinates don't show through the scattergraph. We have surmounted this ridiculous analogy by always making allowance for all parameters. Parameters are beautiful things to have around, even when double blind. A random remark might be included in this discussant's discussion about a randomized analysis of a series of dog experiments

performed in New Canine, Connecticut.

The difference between a smaller series and a modified larger series is well beyond the limits of experimental error. The super-radical components affect the osmolarity of the milli-equivalents both in the degree of radicalness and of radicality, especially in a university environment. Allowance must always be made for the factor of smorgasbord. In order to confirm these end results, I should like to reinforce our long-term follow-up by correlating the procedure with the number of non-vagotomized recurrences. Before concluding I should like once again to congratulate the speaker for his lucid extrapolation and for the opportunity of being the first discusser.

May I have the first slide, please?

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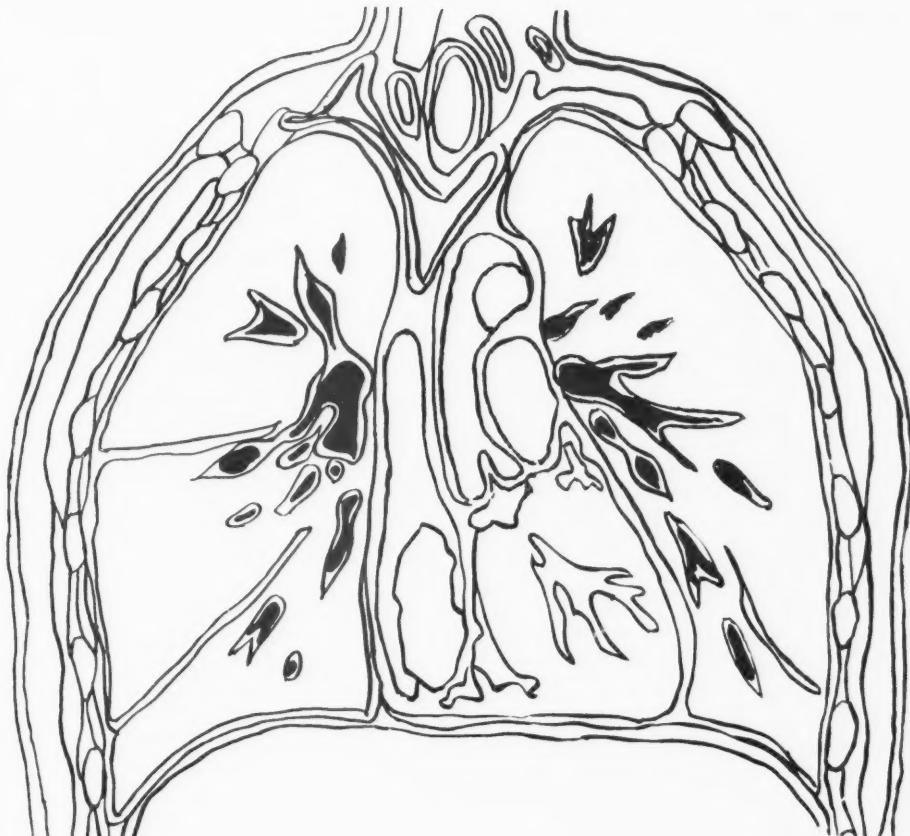
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## MEDICAL CARE FOR THE OVER AGE 65 PERSON IN RHODE ISLAND

**Report of the Committees on Social Welfare and Aging, as submitted to the House of Delegates of the Rhode Island Medical Society, September, 1960**

ONE YEAR AGO the Rhode Island Medical Society, through its Committee on Medical Economics, issued a detailed study on the subject of Medical Care for the Older Age Population in Rhode Island. The report won wide comment for its constructive opinions and its factual presentation of the existing health insurance coverage held by persons over the age sixty-five in this state.

The report stated in its summary that—

"The evidence that older aged persons seek and receive medical care in Rhode Island, and pay for the services in full or in part, according to their means, indicates both an appreciation of the importance of our elders in maintaining good health, and at the same time a fine co-operation between the physicians and health agencies in our communities in providing medical services at reasonable cost."

The report concluded with the statement—

"Your Committee believes that outstanding progress has been made in Rhode Island to assist the over age 65 person to meet his medical care costs, and that every agency and citizen should be urged to contribute positive and constructive thinking to a solution to this and other health care problems at local levels and without federal intervention and subsidy that could lead to further socialization and yielding of personal liberties."

\* \* \*

In the intervening year the situation has improved in Rhode Island as regards medical insurance protection for the older aged citizens. Also during the year the federal government has enacted legislation which would provide matching funds to aid the person *not* on public assistance when faced with a catastrophic medical expense, with the individual state authorized to establish and supervise the benefit program.

The creation of a new state fund to accept thereby federal funds for medical care for over 65 aged persons in special circumstances must be considered first in the light of several conditions:

1. The number of persons over 65 who are eligible to receive comprehensive medical care through the existing public assistance "pooled fund" for medical care.

2. The number of persons over the age 65 who would be eligible for assistance if the federal subsidy program is adopted in Rhode Island.

3. The number of persons over the age 65 who have voluntarily secured basic hospital-surgical coverage through Blue Cross and Physicians Service, and private insurance companies.

4. The major phases of the so-called catastrophic medical costs once the basic coverages have been utilized.

5. The health costs that should be given priority if the program is to be accepted by the state, and the conditions under which such benefits would be granted.

6. The funds that can be made available by the state to initiate this special program of catastrophic medical costs benefits.

From a practical and a realistic point of view, the entire problem cannot be adequately appraised for Rhode Island until the state determines to what extent it can allocate funds for a special "pooled fund" for catastrophic health costs for the over age 65 person not receiving public assistance. And that appropriation realistically should not be set until the state government has some understanding of the *actual potential demands* as opposed to *assumed potential demands* upon the contemplated program.

### **State Public Assistance "Pooled Fund" for Medical Care**

Rhode Island ranks ninth among the states of the nation in its per capita outlay toward public welfare, and it is one of the sixteen states providing direct or money payments for all essential health care items, including hospitalization, physician services, drugs and ancillary services. The State Division of Public Assistance has approximately 6,000 persons over the age of 65 years for whom it is providing benefits including medical care through the "pooled fund" into which it annually places \$166 per person.

Here then is the basic group of needy persons for whom the state, with federal subsidy, is already providing essential medical care. Under the new legislation enacted by Congress these beneficiaries are excluded from the legislation, although the

state may use funds otherwise available to augment the public assistance grants. \$485,000 additional federal funds have been made available for use in such manner as Rhode Island wishes, either to improve the present public assistance program or to initiate a new phase.

#### *Number Eligible Under the New Program, if Established*

In a recent study Blue Cross-Physicians Service estimated a population in Rhode Island of 83,000 over the age 65, of whom approximately 73,560 were considered to be self-supporting on the basis that they were not beneficiaries of state-federal public assistance programs, or confined in a state institution.

The local Social Security System director recently gave an estimate of approximately 63,000 Rhode Islanders over 65 receiving Old Age and Survivors Insurance benefits.

Of the estimated 73,560 considered in the self-supporting group, as indicated above, Blue Cross has enrolled 68,712, and Physicians Service has enrolled 56,549.

Thus, if the 73,560 figure is used as a basis for the number eligible for state-federal benefits under a new medical care for those over 65 years, it is readily apparent that most of these people already have basic coverage for essential hospital, surgical, and in-hospital medical care.

Certainly this voluntary coverage in the local Blue Plans, plus insurance purchased by persons over 65 through private insurance companies, should not be disturbed, but rather should be supported and protected.

#### *What are the Major Catastrophic Medical Costs?*

If the new legislation has any purpose it would appear to be the fulfillment of the offer to aid persons over the age 65 not on public aid rolls "whose income and resources are insufficient to meet the cost of specified hospital, medical, dental, nursing and allied services."

Here, then, a need exists for a clear-cut determination of what shall be the limit of basic responsibility that the citizen should accept, beyond which the state would reach out and accept the costs for long-term hospital, nursing home, and physicians care, and medications.

Criteria must be established, not to penalize any potential recipient, but to protect all in order that the program may effect the purpose for which it is created. To discourage the use of such terms as "medically indigent," or "means test," and to try and clothe the new medical care program in exaggerated verbiage may be good politics, but it is not good sense to the average citizen. As was pointed out in the Congressional debate on the legislation, and as Webster's dictionary will substantiate,

"medically needy" is no different than "medically indigent"; and the need for a means test is an accepted part of many federal programs—Veterans' Administration, farmers' disaster loans, small business loans, assistance to the blind, aid to permanently disabled, old age assistance.

Therefore the issue should be faced realistically, and recognition given to the fact that the community has always accepted responsibility for the welfare of the incapacitated, whether from causes of age, youth, disease, or misfortune.

We should not jeopardize our present well-established public assistance programs by siphoning off state money for a new plan without valid reasons for the action. Medical science has increased the number of older citizens in our midst, but at the same time the productive portion of life has increased proportionately to the life span. As the Rhode Island Medical Society pointed out in its report a year ago, the public must reappraise upward its conception of the retirement age, and the age at which incapacity for work and income production becomes prevalent.

It is fallacious to assume that all, or even a large proportion of those who are retired, or are within the age of what we consider as the retirement age, are financially unable to provide medical care for themselves by their own resources or with the aid of their families.

The statement has been made that 50,000 of the persons over 65 years of age in Rhode Island have incomes of less than \$1,000. This statement warrants verification, and even if it is true it cannot be used as a generalization that all such persons are in dire financial straits. As was pointed out by Senator Thurmond in the Congressional debate on this question of income, "a person over 65 has an advantage in disposable income over a younger person with equal income. A young couple, with two children and earnings of \$4,000, pays approximately \$365 in federal income and FICA taxes, while a couple over 65 with \$2,000 from social security and \$2,000 income from other sources, would pay no federal taxes on the \$4,000 income..." (and further) "Currently, over 70% of old age and survivors disability insurance beneficiaries own their own homes, and 87% of these are mortgage free..." (and) "When considered in the light of a general decrease in several areas of financial responsibility that accompanies retirement, the decreased tax bite of the National government, and the cushion provided by the increasing existence of substantial assets, these income figures do not justify the picture of gloom and doom that is being presented to the public, both at home and abroad, in regard to the status of our elder citizens' financial ability to meet their physical needs, including medical care. When considered objectively, the

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situation is not really so calamitous; and, even more encouraging, it is improving."

The voluntary efforts of our elder citizens in Rhode Island, as reported in the Society's study a year ago, bear out substantially these observations.

#### *The Financial Picture*

A breakdown of estimated federal and state matching funds for the first year of the proposed new program of medical care for the over age 65 citizens, *based on maximum state participation*, would cost the state of Rhode Island an additional \$896,000 for it to secure a matching federal subsidy of \$1.4 million. In other states the maximum utilization results in millions for putting up only a few thousands.

The tax cost to Rhode Islanders warrants more than a casual look. As Senator Lausche of Ohio pointed out in discussing this issue before the Congress, his state of Ohio "will receive \$7,766,000, providing it spends \$1,336,000. This amount of \$7,766,000 which it will receive is a little more than 3½% of the 200 million dollars that the federal government will expend on a national basis for the fifty states.

"However, statistics show that while Ohio will receive 3½%, it will have to pay by way of taxes 6% of the 200 million dollars, or in other words 12 million dollars. Thus to receive \$7,766,000 it will have to expend 12 million dollars by way of federal tax, plus \$1,336,000 as its share of the program, amounting in all to \$13,336,000. . . ."

On the same basis Rhode Island would pay ½% of the 200 million dollars additional federal tax, or in other words, one million dollars, plus \$896,000 of state money as its share of the program, making a total of \$1,896,000, to get back \$1,381,000 from the federal government!

#### *A Possible Solution*

If the principle of aiding the citizen over the age 65 who encounters catastrophic health care costs, although able to cope with his other living and maintenance expenses through personal income and resources, is accepted by the state, then the state may well consider the development of an aid program without any subsidy or regulation from the federal government and not circumscribed by federal regulations.

The acceptance of the federal subsidy is surrounded with federal regulations that provide among others that a single state agency *must* supervise the plan; that there must be an opportunity for a fair hearing before the state agency to any individual whose claim for assistance under the plan is denied or is not acted upon with *reasonable promptness*; provide such methods of administration as the secretary (federal) of health, education and welfare *finds necessary* for the proper and efficient operation of the plan; provide the same

secretary with such reports, in such form and containing such information, as he may from time to time require, and *comply* with such provisions as the secretary may from time to time *find necessary* to assure the correctness and verification of such reports; provide safeguards which restrict the use or disclosure of information concerning the applicants and recipients to purposes directly connected with the administration of the state plan; provide that anyone wishing to make application for assistance under the plan shall have the opportunity to do so, and that such assistance shall be furnished with *reasonable promptness* to all eligible individuals; provide for inclusion of some institutional and some non-institutional care and services; provide that no enrollment fee, premium, or similar charge will be imposed as a condition for any individual's eligibility for medical assistance; provide for inclusion, to the extent of regulations prescribed by the *federal* secretary, of provisions for furnishing assistance to residents absent from the state; include reasonable standards for determining eligibility for and the extent of such assistance.

Under an exclusive state operated plan the state might allocate from its general funds not otherwise assigned, such moneys as feasible to be set apart in a special Old Age Health Assistance Fund to aid persons over the age 65 who are not recipients of old age public assistance, but whose income and resources are insufficient to meet the cost of catastrophic health care costs, such as hospitalization, nursing home care, drugs, physician services, etc.

Under such a proposal the Division of Public Assistance of the State Department of Social Welfare might administer a most effective program unhampered by restrictive federal regulations, and at an actual cost to the individual tax payer far less than a federal-state matching subsidy plan as set forth in the Congressional legislation this year.

Certainly the local supervision, control and disbursement of payments for services could be most effectively handled under an exclusive state-conducted plan, and, as Senator Lausche and our comparable figures illustrate, at a cost that would not unduly penalize the income of the people of a progress state such as ours.

When the officers of the state government determine what funds can be made available to aid the person over 65 with special aid for catastrophic health costs, the Rhode Island Medical Society offers its complete co-operation in developing a program for physician participation to provide the best possible medical care for such persons.

#### THE RHODE ISLAND MEDICAL SOCIETY

*Committee on Social Welfare*

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## THE RHODE ISLAND REPORT FOR THE WHITE HOUSE CONFERENCE ON AGING

### Highlights Abstracted from the Report to be made in Washington in January, 1961

#### *I Economics and Employment*

THE FINANCIAL PROBLEMS of older persons in Rhode Island are closely related to its highly industrialized economy and the dependency of its people upon wages. Rhode Island, its people and its institutions are in the vanguard of social change. The state's economy is sensitive to fluctuations in employment, income, and the cost of living. Increasingly the rest of the nation is reflecting similar, if presently less extreme sensitivity.

At present, over three fourths of the aged population receive OASDI benefits. Rhode Island ranks first in the nation in this respect. Relatively few older persons receive OAA, but of those who do, nearly two out of five also are recipients of OASDI benefits whose "social security" payments are so low that they must be augmented to meet even a subsistence income. Inflation can gradually undermine the older person's financial security by shrinking the value of his OASDI benefits, his OAA payments, and his savings. A serious illness, a disabling accident, or the loss of a job in the later years can be a personal financial catastrophe.

The recommendations pertaining to income maintenance, inflation, and employment security go beyond the borders of Rhode Island. They are addressed to a nation which may expect to see increasing numbers of its older citizens affected by similar economic considerations.

#### A. Population Trends and Social and Economic Implications

\*An understanding of present population trends and their social and economic implications is fundamental to any reasonable approach to any present-day social phenomenon.

The rapid growth of urbanization is an equal factor with the increase in longevity of our population in the creation of problems faced by our older persons.

The emptying out of the more mobile elements of population from metropolitan centers has left behind residual groups with high concentrations of older persons and this fact has been acknowledged

\*No recommendations

\*\*Action at state or local level.

in recommendations regarding housing in this report.

At the same time, the social isolation, less dramatically evident, but probably at least equal in degree, for many who live in suburbia, demands attention, not only from social planners but from agencies responsible for development of land-use patterns, routing of highways, establishment of zoning codes and from other responsible community leaders.

The Work Groups which developed all the recommendations in this report gave consideration to the impact of "urban sprawl" and had the benefit of an address dealing with this subject delivered at the Rhode Island Preparatory Conference session in Newport, June 29, 1960.

To attempt to recommend action in any area of concern in this report without reference to the changed and changing nature of community and family life which has resulted and is resulting from the urban growth spreading across the country, would be the height of absurdity.

A twenty-minute 16 mm. film devoted to this factor is expected to be available as soon as an appendix to the final Rhode Island Report to the White House Conference on Aging.

#### B. Income Maintenance — Recommendations

1. Adjust periodically to more realistic levels the monthly benefit payments to OAA recipients.

2. That the federal government provide funds for the conduct of an exhaustive study of minimum budget requirements for older citizens in an effort to establish budget guides on a regional basis.

3. That the widow's benefits in the OASDI program be increased from 75 per cent of the primary benefit to 85 per cent if this increase can be accomplished without an increase in payroll contributions.

4. That the federal government undertake a study to determine the need for standards or criteria in the area of children's responsibility for support of OAA recipients.

5. Voluntary solutions of the problems of health care have been adequate in Rhode Island but further extension is desirable. The aged must receive adequate financial help to cope with the cost of living and health care.

6. Include in the OASDI program the payment of hospital expenses for aged beneficiaries under the OASDI program.

#### C. Impact of Inflation — Recommendations

1. That a new formula be introduced into the OASDI program providing for variable benefits which might be more closely tied to changing economic conditions.

#### D. Employment Security and Retirement Recommendations

1. That additional funds be made available for service to older workers in order that the employment counseling program for older workers may be extended and expanded.

2. That the studies of characteristics of unemployed older workers, employment opportunities for older workers, and hiring practices of employers be continued and expanded as part of the regular Employment Security research program and that they be co-ordinated with other research studies of older workers such as those now being conducted at Brown University.

3. Arbitrary age-retirement should be eliminated in accordance with the modern concept that continuing motivation is essential to health.

### II. Health Care and Rehabilitation

Rhode Island is working toward the development of a well-rounded health program available to persons of all ages. It is recognized that adequate medical, hospital, dental, and nursing services form the cornerstone of any program designed to promote the well being and security of the older population.

A study made in 1952 revealed that 46 per cent of the persons over sixty-four in Rhode Island were in poor health or were physically handicapped. The importance given to health care by elders themselves is evident in the fact that over 90 per cent of the aged self-supporting population had hospital service insurance coverage under Blue Cross in 1959, despite its relatively high cost for older persons.

The Rhode Island Council of Community Services has selected chronic illness as its major focus and is undertaking the planning of a co-ordinated attack upon it.

The Rhode Island Department of Health is broadening its program with particular emphasis on the assumption of local health services.

Presently envisioned is a broad health program enlisting the services of both private and public health personnel and involving the co-operation of those federal, state, and community agencies and organizations dedicated to meeting the health needs of older people.

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*concluded on next page*

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of Fatima Hospital rehabilitation program, and the Information Center for Chronic Illness and Aging at the Rhode Island Council of Community Services.

#### A. Health and Medical Care—Recommendations

1. It is recommended that individual physicians and agencies serving the chronically ill in their homes provide instruction to assure better planning of low-cost, nutritious meals.

2. Sponsorship and financing of meals-on-wheels program as a demonstration project should be undertaken by a local or state agency.

3. Greater utilization and improvement of existing services available to the aged can be effected by establishment of state units of the Joint Council on Health Care of the Aged. Such a unit could disseminate information and achieve communication locally among all interested groups and individuals.

4. Home-care programs should be established to bring health teams of various disciplines dealing jointly with the health needs of the patient and his family into the homes to serve chronically ill and aged persons.

5. Provide health examinations for each OAA applicant and periodic subsequent examinations for each OAA recipient.

\*\*6. It is recommended that legislation be enacted to permit the State Social Welfare Depart-

ment to provide payment for the care of aged infirm persons in nonprofit old-age homes commensurate with that paid to nursing, convalescent and rest homes when the nursing care given the patients is comparative.

7. There is a need for better awareness of the need for preventive dental care. Mouth tissues begin to show debilitation at least twenty years before age 65. It is recommended that a widespread program of education on mouth care be undertaken co-operatively by the American Dental Association, the United States Public Health Service, and the toothpaste manufacturers to reduce the large number of dental cripples in our elderly population, and that the standards and training of hospital and nursing personnel should assure adequate oral hygiene for all patients.

#### B. Rehabilitation — Recommendations

1. It is recommended that the Congress enact legislation and appropriate funds to provide rehabilitation for independent living through the facilities of the Office of Vocational Rehabilitation.

### III. Social Services and Family Life

#### A. Social Services — Recommendations

1. Broad expansion of a homemaker service for the chronically ill patient is needed as an adjunct to the social service programs of hospitals, public health nurses, and other voluntary agencies.

#### B. Family Life — No Recommendations

\*The pattern of differentiated functions and high rates of mobility which characterizes our urban communities also characterizes the families which are their smallest units. It is unlikely that this will be changed by pious utterances. It is more likely that greater understanding of social change by individuals and greater ability to relate to other individuals and groups on a less personal basis will come about as a necessary adaptation. Recommendations made elsewhere in the report are directed toward improvement of physical and mental health of individuals and wider opportunities for performance of a role that can be meaningful to individuals with or without supportive family relationships.

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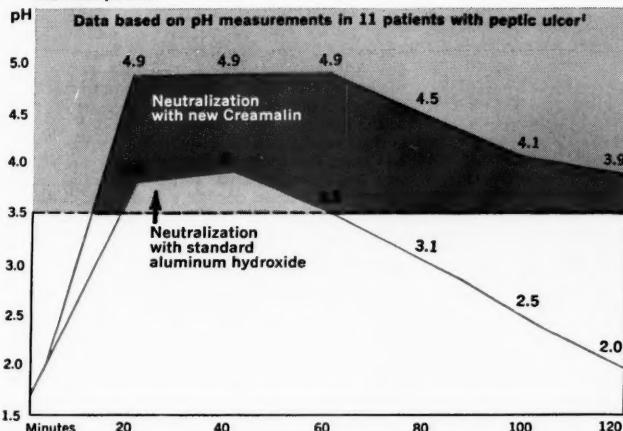
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1. Data in the files of the Department of Medical Research, Winthrop Laboratories. 2. Hinkel, E. T., Jr.; Fisher, M. P., and Tainter, M. L.: *J. Am. Pharm. A. (Scient. Ed.)* 48:384, July, 1959.

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### NATIONAL PROBLEMS IN MEDICAL EDUCATION\*

"The nation's eighty-five medical schools (four are two-year schools) succeeded last year (1959) in turning out 6,900 physicians—to this number must be added about 1,400 trained in foreign schools—bringing the total number of doctors in the nation to about 235,000. With a population approaching 180,000,000, we have about 130 doctors per hundred thousand population. In Massachusetts, New York and California, where the proportion is about 175 per hundred thousand, the situation is better. But if one goes South, especially west of the Mississippi, there are less than half that number—only 75. Current plans for expansion will increase the yearly output of doctors from 6,900 to 7,500 by 1965, but this increase will be inadequate to maintain the present ratio of doctors to population. To do this, it is estimated that the national output will have to be 11,000 graduates a year by 1975, an increase of 50 per cent or of 3,500 graduates a year. It is very doubtful, however, that the mere maintenance of the present ratio will satisfy either the demands of the American public for better medical care, or the national desire for a stronger, healthier America.

"The critical resource in the complex industrial society that is the United States today is the capacity of the individual to achieve. Health is vital to achievement, whether it be for the individual or the nation; only a healthier America can become more productive—medical education is the foundation.

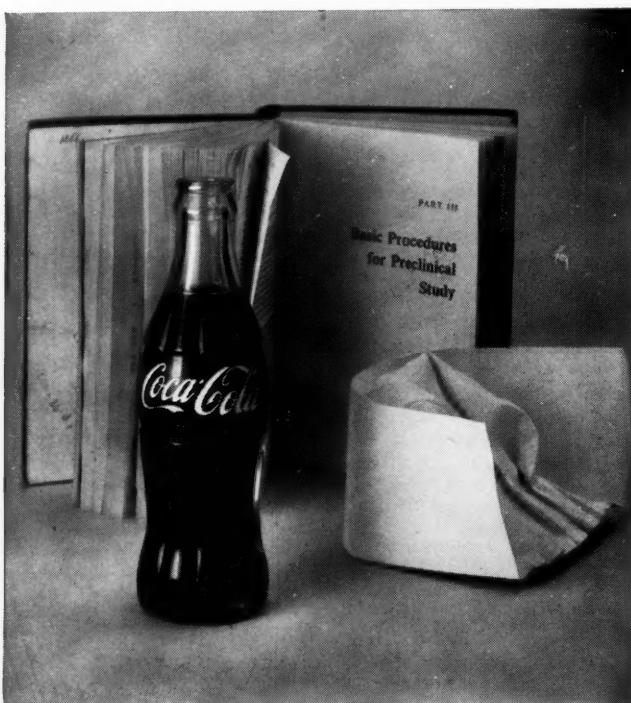
"Add to the requirements of an expanding population, the increased medical services required by an aging population, the growth of urbanization, an improving economic status, more health insur-

ance, increasing appreciation of medical care, the startling increase in medical research, and it becomes clear why an estimated need for more physicians based only on population growth is conservative.

"There are other major difficulties magnifying the problem on the national scene... Many medical schools are having trouble filling their first-year classes because the quality of their applicants is declining. Less able students are applying and more are dropping out after matriculation. The competition with other walks of life is taking its toll of potential applicants (Ph.D. programs particularly are cutting into the number) and the long duration and high cost of medical education often discourage young men and women...

"To solve the national problem, three moves are afoot: (1) the expansion of existing medical schools; (2) the creation of new four-year schools; (3) the exploitation to the full of educational institutions that can extend their graduate work to provide instruction in the basic sciences required in the first two years of medical school. Dartmouth is the prototype of the two-year medical school; it has been producing twenty-five boys a year—most of them complete their last two years at Harvard—and it is about to double this output. Other good schools are exploring this possibility—Brown, for instance, is interested... But, basic to every solution is one issue: the production of more teachers. They are already in short supply..."

\*Remarks by Dr. George Packer Berry, Dean of Harvard University Medical School, to the Board of Overseers of the University and the Visiting Committee for the Medical and Dental Schools.

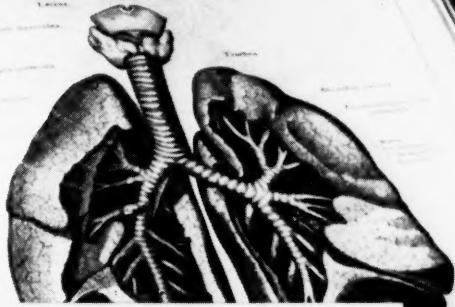


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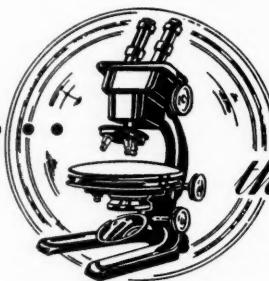
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Many of the medical lessons learned during World War I had to be relearned under fire during World War II because of paucity of distribution of the World War I medical history.

Lieutenant General Leonard D. Heaton, the army surgeon general, in an endeavor to prevent this costly relearning process, in the unhappy event of another war, has directed the preparation, publication, and distribution of the HISTORY OF THE MEDICAL DEPARTMENT, UNITED STATES ARMY, IN WORLD WAR II. General Heaton is particularly anxious that information of the existence and availability of this history be circulated widely among the profession, both military and civilian.

Of the forty-eight volumes programmed for the series, fifteen have been published and can be purchased at modest cost from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. The set of fifteen volumes may be purchased for \$66.50 or individual volumes can be obtained at remarkably low prices. Commanding officers of medical units may requisition copies for their medical units libraries by submitting DA Form 17 directly to The Historical Unit, U.S. Army Medical Service, Washington 12, D.C., attention: Promotion Branch.

Volumes now available are: GENERAL SURGERY, edited by Michael E. DeBakey, M.D. NEUROSURGERY, Volume I (Head Injuries), edited by R. Glen Spurling, M.D., and Barnes Woodhall, M.D. NEUROSURGERY, Volume II (Spinal Cord and Peripheral Nerve Injuries), edited by R. Glen Spurling, M.D., and Barnes Woodhall, M.D. HAND SURGERY, edited by Sterling Bunnell, M.D. OPHTHALMOLOGY AND OTOLARYNGOLOGY, edited by M. Elliott Randolph, M.D., and Norton Canfield, M.D. ORTHOPEDIC SURGERY, EUROPEAN THEATER OF OPERATIONS, edited by Mather Cleveland, M.D. ORTHOPEDIC SURGERY, MEDITERRANEAN THEATER OF OPERATIONS, by Oscar P. Hampton, M.D. PHYSIOLOGIC EFFECTS OF WOUNDS, edited by Fred W. Rankin, M.D., and Michael E. DeBakey, M.D. VASCULAR SURGERY, edited by Daniel C. Elkin,

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#### *M.D. Visits Average Five a Year*

The average American consults a doctor about his health five times a year, the Health Insurance Institute reported recently.

This adds up to some 852 million physician visits a year, the Institute said in its report based on data collected by the United States Department of Health, Education and Welfare in a twenty-four-month period from July 1957 to June 1959. The Institute pointed out that this does not include physician visits to persons while they were hospitalized.

Most visits take place in the doctor's office. Two out of three visits, or 66 per cent, occur in the office, 10 per cent at home, and 14 per cent in an outpatient clinic of a hospital, industrial health unit, or other location. About 10 per cent of all visits were telephone consultations.

As for the purpose of the visit, 75 per cent were for diagnosis and/or treatment of an illness or injury. Eight per cent were for general checkups and seven per cent were for immunizations.

Going by region, residents of the West and Northeast consult doctors more frequently than persons living in the Midwest or South. The average number of physician visits in the West is 5.7 per person a year, in the Northeast 5.4, and in both the Midwest and South 4.7.

The educational attainment of the head of the family and the amount of family income had a direct bearing on the rate of physician visits, said the Institute.

*continued on page 794*

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In patients with edema induced by the earlier corticosteroids or from other causes, diuresis and sodium loss often occurs with triamcinolone. (Fernandez-Herlihy, L.: *M. Clin. North America* 44:509 [Mar.] 1960.)

**SPECIAL PROBLEM: APPETITE STIMULATION AND WEIGHT GAIN**

In contrast to the heightened craving for food sometimes seen with other corticosteroid compounds, appetite was unaffected by triamcinolone. (Cahn, M. M., and Levy, E. J.: *Am. Pract. & Digest Treat.* 10:993 [June] 1959.)

**SPECIAL PROBLEM: HYPERTENSION**

When ARISTOCORT was given to patients with dermatologic disorders for long periods, there were no significant changes in blood pressure. (Kanof, N. B.; Blau, S.; Fleischmajer, R., and Meister, B.: *A.M.A. Arch. Dermat.* 79:631 [June] 1959.)

**SPECIAL PROBLEM: PSYCHIC STIMULATION AND INSOMNIA**

Ideally, corticosteroid therapy ought not to add to the psychic component in dermatologic disorders, nor induce insomnia which will intensify the patient's itching and irritation. ARISTOCORT Triamcinolone has been singled out for its remarkably low incidence of psychic irritation and insomnia. (McGavack, T. H.: *Nebraska M. J.* 44:377 [Aug.] 1959; Freyberg, R. H.; Berntsen, C. A., Jr., and Hellman, L.: *Arthritis & Rheumatism* 1:215 [June] 1958.)

**SPECIAL PROBLEM: SEVERE CARDIAC DISEASE**

Elderly patients with pulmonary emphysema due to impending heart failure who required corticosteroid therapy showed that triamcinolone could be employed with benefit and relative safety. (McGavack, T. H.; Kao, K. Y. T.; Leake, D. A.; Bauer, H. G., and Berger, H. E.: *Am. J. M. Sc.* 236:720 [Dec.] 1958.)

*Precautions:* Collateral hormonal effects generally associated with corticosteroids may be induced. These include Cushingoid manifestations and muscle weakness. However, sodium and potassium retention, edema, weight gain, psychic aberration and hypertension are exceedingly rare. In the treatment of allergic and inflammatory dermatoses, dosage should be individualized and kept at the lowest level needed to control symptoms. Dosage should not exceed 36 mg. daily without potassium supplementation. Drug should not be withdrawn abruptly. Contraindicated in herpes simplex and chicken pox.

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### THROUGH THE MICROSCOPE

*continued from page 790*

#### Educational Factor

Where the head of the family had less than five years of education, the average number of physician visits was 4.3 per person a year while families in which the head of the family had attended college had an average rate of 6.0 visits per person a year.

Members of families having incomes under \$2,000 had a rate of 4.6 physician visits per person a year compared with 5.7 visits for persons in families earning \$7,000 or more, the Institute reported.

The average city dweller consults his doctor more frequently than the average farmer. The urbanite has physician visits at the rate of 5.3 a year compared to the farmer's 3.8.

Women averaged a greater number of physician visits than men, 5.6 a year to 4.4. Boys under age 15 saw doctors more frequently than girls but females led in all age brackets starting at age 15.

The two age groups with the highest rates of physician visits were under age five and 65 and over. The average infant had 6.2 physician visits a year, compared to 6.8 for the average senior citizen.

The survey indicated that being a housewife might be more of a physical burden than being a career girl. The average homemaker saw a doctor 6.3 times a year while the working girl consulted a physician 5.8 times, the Institute said.

### RHODE ISLAND MEDICAL JOURNAL

#### The Old-Fashioned Family Doctor

##### Decreasing in Numbers

The old-fashioned family doctor, so long the major figure on the American medical scene, is rapidly decreasing in numbers.

Currently, only one of every three physicians is a general practitioner, according to figures cited in a recent issue of *Patterns of Disease*, a Parke, Davis & Company publication for the medical profession. Yet less than thirty years ago, two out of every three physicians were in general practice.

Supplanting the family doctor, and at an ever-increasing rate, is the medical specialist. Within one generation, the number of specialists in the nation has increased 500%. The trend toward specialization has been especially marked in recent years. Of physicians who graduated from medical school in 1930, about 30% were in general practice five years later—a percentage which dropped to 26% of 1945 graduates and even more abruptly, to 18% of 1950 graduates.

Moreover, the trend is, if anything, accelerating. A *Patterns* survey of third- and fourth-year medical students revealed that 67% had already decided to specialize. Only 13% intended to enter general practice, while the remaining 20% were, as yet, undecided.

Internal medicine attracts more physicians than any other specialty. In fact, internists constitute one of every six of the 62,783 physicians certified by specialty boards (diplomates) in the nation. Second on the list of specialties is surgery, with 8,047 diplomates, followed by pediatrics, with 6,028 diplomates, and psychiatry and neurology, with 5,520 diplomates. Smallest of all specialty groups are the proctologists, who number 243. Also relatively few and far between are specialists in physical medicine and rehabilitation, who total 312, and plastic surgeons, of whom there are 330.

#### Major Medical Expense Insurance on the Increase

The American public, in ever increasing numbers, is turning to major medical expense insurance as a means of financing their medical care expenses, the Health Insurance Institute said recently.

Major medical, sometimes called "catastrophe" insurance, covered 5.2 million persons at the end of 1955, or one out of every 33 persons among the civilian population.

As of June 30, 1960, however, major medical covered an estimated 24 million persons, or one out of eight persons.

Major medical, with benefits ranging as high as \$10,000 or \$15,000, helps pay for virtually all types of medical services, including medicines and drugs, medical appliances and physicians' services, and covers practically every kind of treatment needed for recovery—either in or out of hospital and by a



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licensed physician anywhere. This includes such charges as care by a registered nurse at home or in hospital, ambulance or other necessary transportation costs, and dressings.

A typical major medical policy has two identifying features—the deductible and co-insurance. The deductible, similar to that used in automobile insurance, may range from \$25 to \$500, depending on the policy, and is the amount of initial medical expenses the insured must pay before his policy benefits begin. The Institute pointed out that the higher the deductible, the lower the premium.

Co-insurance, in which the policyholder shares part of the risk with the company, comes into effect after the deductible has been applied, with the company paying 75-80% of the bills, and the insured paying 25-20%, according to policy provision.

The most popular type of major medical—covering 14 million persons of 20 million protected under group plans—is one where the "catastrophe" insurance supplements basic hospital-surgical insurance, paying out benefits after the basic plan reaches its exhaustion point.

In one typical case, a young couple and their children were covered at the husband's place of employment by a basic plan and supplemental major medical protection, toward which they paid \$8.25 monthly and the employer paid slightly more.

The major medical policy provided that the insurance company would pay 80% of the medical care charges above payments made through the basic plan and above a \$100 deductible.

The couple were involved in a serious auto accident. The husband was hospitalized for forty-six days with several fractures in his arm and bones of his back. The wife suffered cuts and bruises of her face, head, arms, thighs and legs.

Their total medical expenses came to \$3,282 but the young couple had to pay only \$460.20. Their basic plan paid the first \$1,381. Then they paid a deductible of \$100 and 20% co-insurance, or \$360.20, of the remaining \$1,901, and their major medical insurance paid \$1,440.80.

#### *Family of Medical Student Bears Brunt of Education Costs*

More than 80% of the funds used to pay the student's costs of medical education come from the student and his family, a report by the Association of American Medical Colleges shows.

Conducted by the Continuing Group for Student Affairs, with the co-operation of the Association of American Medical Colleges headquarters staff, the report examines in detail the financial position of the American medical student, including the impact of marital status on finances and a comparison with the arts and sciences graduate student.

Called *The Financial Position of the American Medical Student*, the report is based on questionnaires filled in by 4,899 seniors from the 1959 graduating class of the 78 medical schools in the United States. Its author is Doctor J. Frank Whiting, assistant director of the Division of Operational Studies of the A.A.M.C.

The study points out that 62% of the medical students in the 1959 graduating class were married and notes the sharp rise in the cost of medical education to the student as he becomes "more and more married," students who are married with two or more children having approximately 60% more to pay in bills over four years than single students (\$16,000 compared to \$9,800).

#### *Medical Newspapers to Suspend Publication*

According to the WALL STREET JOURNAL, *Medical News* and *Scope* will both suspend publication in the very near future. These two fine medical newspapers (published by CIBA and Upjohn respectively) have been of great service to the medical profession. The WALL STREET JOURNAL attributes their demise to falling profits in the drug industry and closer controls on advertising and promotion costs.

*continued on next page*



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**Financial Troubles Plague Colorado's Medical Care Plan for Aged**

Colorado's three-year-old medical aid program for old age pensioners is running into trouble. Called one of the most liberal in the nation, the plan may have to be cut back. It's costing too much.

*Costs too much.* The state initially earmarked ten million dollars of tax revenue to cover annual costs of the medical aid plan, which is written into Colorado's constitution. But Welfare Director Guy Justis recently reported that the program is costing \$102,000 a month more than is available for payments.

About a third of the expenditures go for care and drugs in nursing homes; the rest is spent for hospital and doctor bills.

Of Colorado's 52,000 pensioners, 32,733 received some care under the program in the past year, he said.

*Beneficiaries not wards.* Key to the Colorado plan is treating pensioners like beneficiaries of an insurance system rather than wards of the state. Pensioners are eligible for identification cards entitling them to service benefits comparable to those of Blue Cross and Blue Shield plans.

*Paid-in-full.* Their paid-in-full benefits include

**RHODE ISLAND MEDICAL JOURNAL**

surgery; 30 days in the hospital with additional hospitalization if authorized by the Welfare Department; two doctors' visits, home or office, in three months; and nursing home care after hospitalization is covered, with up to 12 doctors' visits every three months.

The "cost-plus" program is administered by Blue Cross-Blue Shield and fully paid by the state. The Blue plans are reimbursed for claims paid with a small service charge added for every claim. The 1959 administrative cost of the medical program was 2% of the year's total bill.

The plan is supported by such diverse groups as the Colorado Labor Council, Colorado State Medical Society and Denver Chamber of Commerce.

**Arthritis Quackery to be Attacked at National Level**

Plans for a national conference of leaders concerned with the health menace of arthritis quackery were announced in October by Floyd B. Odlum, national chairman of The Arthritis and Rheumatism Foundation. The conference will be held early in March, 1961, in Washington, D.C., according to the announcement made at the voluntary health

(The above reprinted from GROUP HEALTH & WELFARE NEWS, Vol. 1, No. 2, October, 1960)

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organization's twelfth annual meeting.

Mr. Odlum explained that the purpose of the conference will be "to consider ways in which all groups and individuals concerned with the deceitful promotion of arthritis remedies and 'cures' can move against the problem with maximum effectiveness to protect our 11,000,000 victims of this crippling disease."

The problem of quackery in arthritis is the target of a current national campaign by The Arthritis and Rheumatism Foundation. It has been receiving increasing attention throughout the nation as a result of the Foundation's recent disclosure that arthritis sufferers are spending more than \$250,000,000 annually on deceitfully advertised products.

#### *Most Group Policies Cover Dependents*

Nine out of ten group health insurance policies being issued by insurance companies provide coverage for dependents of employees as well as the workers themselves, the Health Insurance Institute said recently.

In 1959, insurance companies issued nearly 21,000 new master group hospital expense policies and almost 19,000 of these extended protection of

the policy to dependents of the employees. Each of these policies may cover from a handful to many thousands of persons.

The figures were almost exactly the same for group surgical expense policies issued by insurance companies in 1959, said the Institute. Last year, 17,930 group medical expense policies, which help pay for doctor visits for non-surgical care, were issued by insurance companies and 15,690 of these policies gave protection to dependents.

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## THE WASHINGTON SCENE

### A Summary Report Prepared by the Washington Office of the American Medical Association

ELECTION OF Sen. John F. Kennedy as President made it probable that the issue of providing health care for the aged under Social Security again will be raised in Congress next year.

Kennedy will go into the White House pledged "to the immediate enactment of a program of medical care for the aged through Social Security." His intentions present a serious challenge to the nation's physicians who have vigorously opposed use of the Social Security system to provide health care for the aged.

Kennedy's program would provide what he described as "a life policy of paid-up medical insurance" for older persons. "It would provide them hospital benefits, nursing home benefits and X rays and laboratory tests on an out-patient basis," he said in his campaign for the Presidency.

He said the Kerr-Mills legislation enacted into law last summer is inadequate. The medical profession supports this federal-state program to provide health care for needy and near-needy aged persons. In approving the Kerr-Mills program, Congress rejected the Social Security approach espoused by Kennedy and union labor leaders.

Kennedy's medical program also included: federal grants for construction, expansion and modernization of medical, dental and public health schools; federal loans and scholarships for medical students; federal grants for renovating older hospitals; increased federal financial support for medical research, including basic research, and expansion of federal programs for rehabilitation of handicapped or disabled persons.

\* \* \*

Food and Drug Administration employees have been cleared of conflict-of-interest charges brought up in the Senate Antitrust and Monopoly Subcommittee's investigation of the drug industry.

A three-member investigating group appointed by Arthur S. Flemming, secretary of Health, Education and Welfare, examined the financial records of 900 FDA employees. The special investigators then reported:

"On the basis of all the evidence before us, it is our judgment that there are no present employees

of the FDA whose sources of personal income are incompatible with their government employment."

The investigators continued to analyze "a mass of fact and opinion" in connection with charges that there has been too close a relationship between some FDA employees and drug companies which they check for conformance to government regulations.

The investigators anticipated that their final report would show the possibility of organization or procedural improvements in the FDA.

The charges were triggered by disclosure at the Subcommittee investigation that Doctor Henry A. Welch, director of the FDA's Antibiotics Division, had received \$287,000 over eight years as a writer and editor for antibiotics publications. After the disclosure, Flemming ousted Welch from the government post.

\* \* \*

Persons with heart and blood vessel diseases have been urged to consult their physicians about routine vaccination against influenza.

In a joint statement, the American Heart Association and the National Heart Institute of the United States Public Health Service said that "evidence of the past three years abundantly confirmed that dangers of influenza are much greater for patients with heart or lung disease than for others." The risk was described as "particularly high for those with lung congestion due to heart disease."

The joint statement added that three recent influenza epidemics had "again emphasized the fact that individuals with cardiovascular or pulmonary disease are more susceptible to the hazards of influenza than is the general population." The epidemics were in the fall of 1957, the spring in 1958 and early this year.

The increased risk was shown both by more severe illness and by higher fatality rates among patients with heart and blood vessel disease, the statement said.

The association and the federal agency said influenza virus vaccine had been shown "of definite value" in preventing the disease. Side reactions were reported as "extremely few."

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Florida Citrus Commission, Lakeland, Florida

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**BOOK REVIEWS**

*VIRUS VIRULENCE AND PATHOGENICITY.* Editors for the Ciba Foundation, G. E. W. Wolstenholme and Cecilia M. O'Connor. Little, Brown and Company, Boston, 1960. \$2.50.

This book is the publication No. 4 of the proceedings of the Ciba Foundation Study Group.

In 114 pages the prominent microbiologists from different countries discuss the following topics: The definition and measurement of virus virulence; Host-cell factors and virus virulence; The effect on virulence of changes in parasite and host; Broad aspects of the problem of human virulence in influenza viruses; The severity of influenza as a reciprocal of host susceptibility; The virulence for man of some respiratory viruses passed in tissue cultures.

The book reflects the difficulties and problems involved in defining and measuring the virulence of viruses and determining the relationship of virulence to the host-factors.

Virulence is defined as the integration of all the characteristics of the virus which are related to its capacity to infect and multiply in the host-cell.

Pathogenicity is defined as the power to produce pathological effects in a host.

Particular attention is paid to the virulence and pathogenicity of the influenza virus. The similarities and differences between the 1918 and the 1957 influenza pandemics are discussed. Similarities: in 1918 and 1957 the human population was deprived of immunological resistance to the prevailing strain. The differences are ascribed to the different degree of intrinsic virulence amongst virus strains and/or to the host and environmental factors. It is of interest to observe that among the discussants there is no agreement concerning the usefulness of the antibiotics in saving lives in the 1957 pandemic. Several studies have revealed that a significant number (about 20%) of virologically proven fatal cases of Asian influenza in 1957 died from nonbacterial pneumonia which resembled closely some of the accurate descriptions of the 1918 influenzal pneumonia. Since antibiotics are ineffective in influenza pneumonia it is concluded by some discussants that antibiotics were useless in saving lives in 1957. The high fatality rate in 1918 was not due to absence of antibiotics but due to

greater intrinsic virulence of the virus. However, there are others who find it hard to deny the possibility that in the absence of antibiotics the 1957 ( $A_2$ ) virus might have produced vastly more fatalities from bacterial pneumonia than it did.

The text is interesting to read, and the discussions by the panelists at the end of each chapter are lively, and at times, intriguing. The book reflects the different and occasionally opposite views of the panel members, and on the whole, contains more questions than answers. Apparently, this is the stage of virology in 1960.

JOHANNES VIRKS, M.D.

*POISONING. A Guide to Clinical Diagnosis and Treatment* by W. F. von Oettingen, M.D., Ph.D. W. B. Saunders Company, Phil., 1958. Second Edition. \$12.50

This book is an excellent compendium relating to its topic—poisoning. The value of this book can best be appreciated by those who noted in a medical editorial not too long ago that one of the most common neglected causes of unexplained death is poisoning, accidental or criminal.

The book is divided into four parts, the first three chapters comprising an excellent brief classification of poisoning, the medicolegal responsibilities of the doctor, conventional emergency measures and equipment which should be in the doctor's bag or available in his office. The second section on diagnosis is an extensive one, ranging from taking the history of the patient in whom poisoning is suspected, to the structural and functional pathology, biochemical changes, and laboratory tests to be performed by the physician where he suspects a poisoning exists. The third division discusses the management of poisoning, in which rationale of treatment, removal of toxic agents, elimination of toxic agents, and detoxification of absorbed poisons are reviewed. In addition, symptomatic treatment and general measures, treatment of after-effects of prolonged poisoning are noted. The final part consists of a detailed description of many toxic agents which may be used with criminal, suicidal, therapeutic, or accidental intent. The alert physician may be surprised to find such seemingly innocuous drugs as sulfadiazine, streptoki-

*concluded on page 803*

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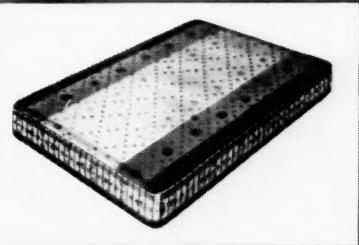
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*Two new titles have been added to the Davenport Collection and are available for circulation:*

DR. KELLY OF HOPKINS by Audrey W. Davis. Johns Hopkins Press, Balt., 1959.  
RING THE NIGHT BELL. The Autobiography of a Surgeon by Paul B. Magnuson. Edited by Finley Peter Dunne, Jr. Little, Brown & Company, Bost., 1960.

*Other purchases were:*

ADVANCES IN INTERNAL MEDICINE, vol. X, 1960. Edited by William Dock and I. Snapper. Year Book Publishers, Inc., Chic., 1960.

ADVANCES IN PEDIATRICS, vol. XI, 1960. Edited by S. Z. Levine. Year Book Publishers, Inc., Chic., 1960.

DIABETIC MANUAL by Elliott P. Joslin. 10th ed. Lea & Febiger, Phil., 1959.

DISEASES OF THE NAILS by V. Pardo-Castello and Osvalda A. Pardo. With a Foreword by the late Howard Fox. 3rd ed. Charles C Thomas, Springfield, Ill., 1960.

DISPENSATORY OF THE UNITED STATES OF AMERICA. Edited by Arthur Osol, George E. Farrar, Jr. and others; with NEW DRUG DEVELOPMENTS. Edited by Arthur Osol, Robertson Pratt and others. 25th ed. Vols. 1 and 2 in 1 vol. J. B. Lippincott Co., Phil., 1960.

HERITABLE DISORDERS OF CONNECTIVE TISSUE by Victor A. McKusick. 2nd ed. C. V. Mosby Co., St. L., 1960.

PROGRESS IN THE BIOLOGICAL SCIENCES IN RELATION TO DERMATOLOGY. Edited by Arthur Rook. Cambridge University Press, Lond., 1960.

RHEUMATOID ARTHRITIS by Charles L. Short, Walter Bauer and William E. Reynolds. Harvard University Press, Cambridge, Mass., 1957.

SURGICAL FORUM, vol. 9. Proceedings of the Forum Session of the 44th Clinical Congress of the American College of Surgeons, Chic., 1959.

SURGICAL FORUM, vol. 10. Proceedings of the Forum Session of the 45th Clinical Congress of the American College of Surgeons, Chic., 1960.

TREATMENT OF CANCER AND ALLIED DISEASES. Edited by George T. Pack and

Irving M. Ariel. Vol. 4—Tumors of the Breast, Chest and Esophagus. 2nd ed. Paul B. Hoeber, Inc., N.Y., 1960.

YEAR BOOK OF CANCER (1959-1960 Series). Compiled and edited by Randolph Lee Clark, Jr. and Russell W. Cumley. Year Book Publishers, Inc., Chic., 1960.

YEAR BOOK OF ENDOCRINOLOGY (1959-1960 Series). Edited by Gilbert S. Gordian. Year Book Publishers, Inc., Chic., 1960.

YEAR BOOK OF MEDICINE (1960-1961 Series). Edited by Paul B. Beeson and others. Year Book Publishers, Inc., Chic., 1960.

YEAR BOOK OF PATHOLOGY AND CLINICAL PATHOLOGY (1959-1960 Series). Edited by William B. Wartman. Year Book Publishers, Inc., Chic., 1960.

*Review volumes from the Rhode Island Medical Journal were:*

EXPERIMENTS AND OBSERVATIONS ON THE GASTRIC JUICE AND THE PHYSIOLOGY OF DIGESTION by William Beaumont. Facsimile of the Original Edition of 1833 Together with a Biographical Essay "A PIONEER AMERICAN PHYSIOLOGIST" by Sir William Osler. Dover Publications, Inc., N.Y., 1959.

CLASSICS OF MEDICINE AND SURGERY (formerly titled: EPOCH-MAKING CONTRIBUTIONS TO MEDICINE, SURGERY AND THE ALLIED SCIENCES). Collected by C. N. B. Camac. Dover Publications, Inc., N.Y., 1959.

Christopher's TEXTBOOK OF SURGERY. Edited by Loyal Davis. 7th ed. W. B. Saunders Co., Phil., 1960.

STERIC COURSE OF MICROBIOLOGICAL REACTIONS. Ciba Foundation Study Group No. 2. Edited by G. E. W. Wolstenholme and Cecilia M. O'Connor. Little, Brown & Co., Bost., 1959.

VIRUS VIRULENCE AND PATHOGENICITY. Ciba Foundation Study Group No. 4. Edited by G.E.W. Wolstenholme and Cecilia M. O'Connor. Little, Brown & Co., Bost., 1960.

CURRENT THERAPY. 1960. Edited by Howard F. Conn. W. B. Saunders Co., Phil., 1960.

TEXTBOOK OF OTOLARYNGOLOGY by David D. DeWeese and William H. Saunders. C. V. Mosby Co., St. L., 1960.

ANATOMY. A Regional Study of Human Structure by Ernest Gardner, Donald J. Gray and Ronan O'Rahilly. W. B. Saunders Co., Phil., 1960.

THE CIGARETTE HABIT: A Scientific Cure by Arthur King. Doubleday & Co., Inc., Garden City, 1959.

YOUR CHILD'S CARE. 1001 Questions and Answers. A new, revised, and enlarged edition of A PEDIATRIC MANUAL FOR MOTHERS by Harry R. Litchfield and Leon H. Dembo. Doubleday & Co., Inc., Garden City, 1960.

FUNDAMENTALS OF CLINICAL HEMATOLOGY by Byrd S. Leavell and Oscar A. Thorup, Jr. W. B. Saunders Co., Phil., 1960.

YOUR HEART. A Handbook for Laymen by H. M. Marvin. Doubleday & Co., Inc., Garden City, 1960.

SMOKING AND HEALTH by Alton Ochsner. Julian Messner, Inc., N.Y., 1959.

I PRESCRIBE LAUGHTER by Thomas Richard Rees. Vantage Press, N.Y., 1960.

THE TEEN-AGE YEARS. A Medical Guide for Young People and Their Parents by Arthur Roth. Doubleday & Co., Inc., Garden City, 1960.

A TRAVELER'S GUIDE TO GOOD HEALTH by Colter Rule. Doubleday & Co., Inc., Garden City, N.Y., 1960.

THE LIST METHOD OF PSYCHOTHERAPY by Elizabeth Sher, Eleanor Messing, Theodore Hirschhorn, Enis Post, Annette Davis and Arthur Messing. With an Introduction by Jacob S. List. Philosophical Library, N.Y., 1960.

MASTER YOUR TENSIONS AND ENJOY LIVING AGAIN by George S. Stevenson and Harry Milt. Prentice-Hall, Englewood Cliffs, 1959.

COMMUNICABLE AND INFECTIOUS DISEASE by Franklin H. Top. 4th ed. C. V. Mosby Co., St. L., 1960.

ORTHOPEDIC SURGERY IN THE EUROPEAN THEATER OF OPERATIONS. Surgery in World War II. Office of the Surgeon General, Department of the Army. Wash., 1956. NEUROSURGERY. Vol. II. Surgery in World War II. Office of the Surgeon General, Department of the Army. Wash., 1959.

POISONING. A guide to Clinical Diagnosis and Treatment. 2nd ed. W. B. Saunders Co., Phil., 1958.

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nase, and streptodornase discussed in this section in addition to such obvious sources of poisoning as spider bites, snake venoms, Rauwolfia, and tryparasamide. Some poisons discussed in this section may contribute more to the physician's culture than to his bread and butter, as, for example, sting ray, selenium, rosemary oil, thiokol, trachinus draco, ultramarine, zygadenus venenosus, and a host of others too numerous to mention.

For the medically-legally inclined physician, this book should be invaluable, and it is certainly a worthwhile volume for any physician to have in his library against the day when the telephone rings, and a poisoning emergency is suspected. Even the most complacent practitioner may be startled to find that in perusing this book his therapeutic wheel-horses, such as sulfadiazine, sulfaguanadine, streptomycin, salicylic acid, polymyxin, penicillin, oxygen, oxytetracycline, neomycin, morphine, cortisone, and phenobarbital, are classified among the poisons. To open this book is to read further than you planned.

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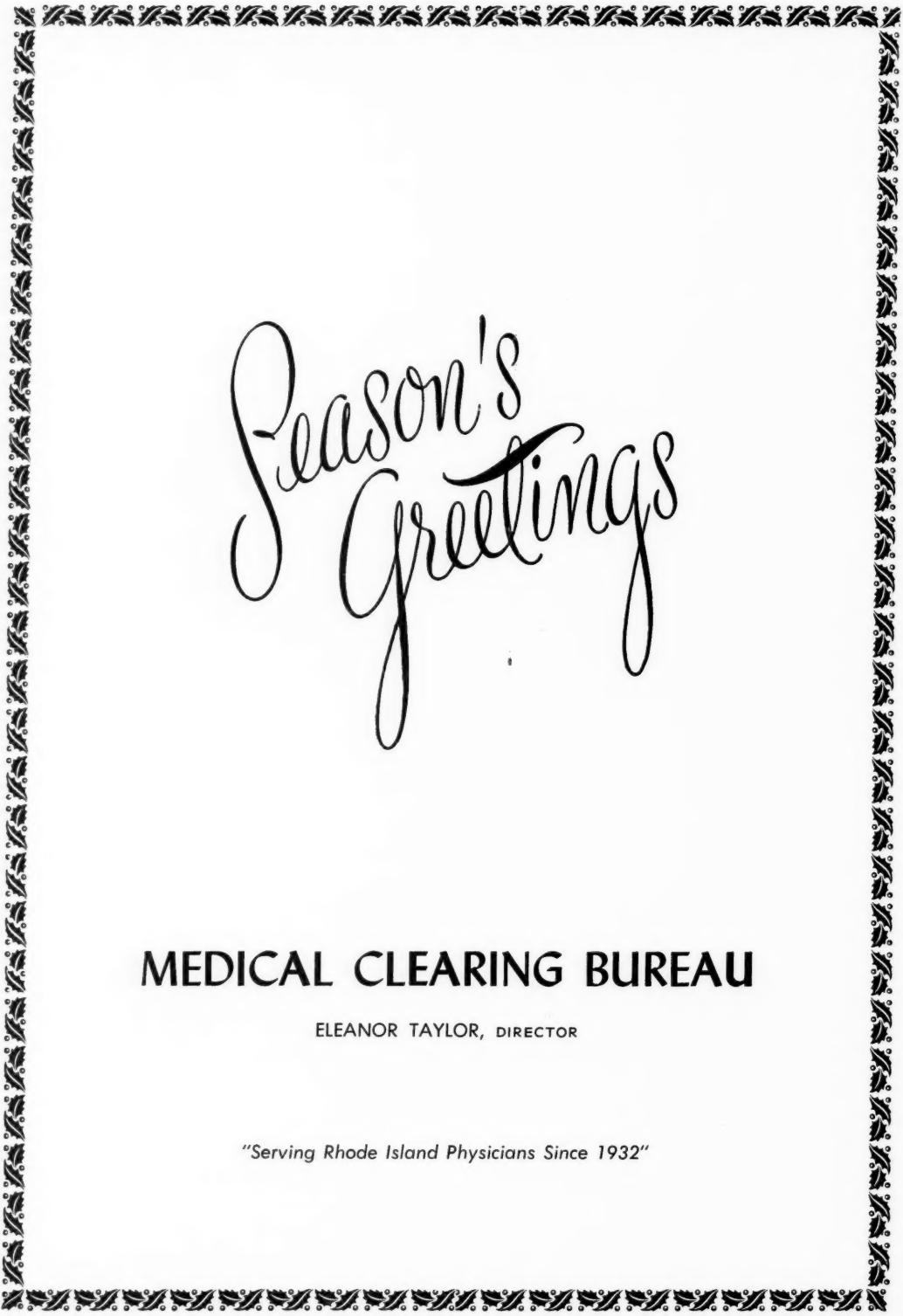
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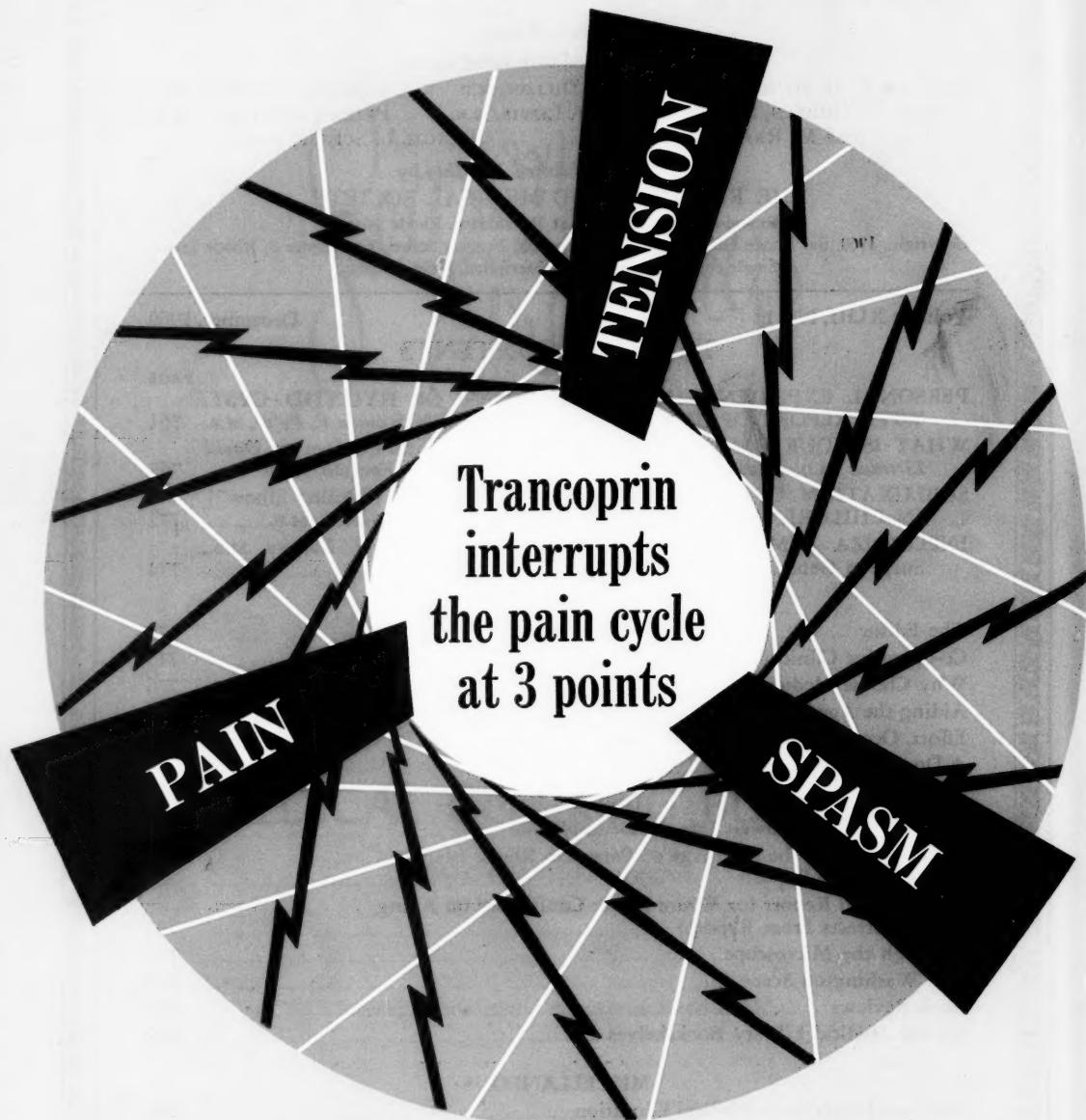
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# Tannourine Trancoprin® Tablets

acetylsalicylic acid (300 mg.) and chlormezanone (50 mg.)



# a broad spectrum non-narcotic analgesic

Trancoprin, a new analgesic, not only raises the pain perception threshold but, through its chlormezanone component, also relaxes skeletal muscle spasm<sup>1-6</sup> and quiets the psyche.<sup>2,3-5,7</sup>

The effectiveness of Trancoprin has been demonstrated clinically<sup>8</sup> in a number of patients with a wide variety of painful disorders ranging from headache, dysmenorrhea and lumbago to arthritis and sciatica. In a series of 862 patients,<sup>8</sup> Trancoprin brought excellent or good relief of pain to 88 per cent of the group. In another series,<sup>9</sup> Trancoprin was administered in an industrial dispensary to 61 patients with headache, bursitis, neuritis or arthritis. The excellent results obtained prompted the prediction that Trancoprin "... will prove a valuable and safe drug for the industrial physician."<sup>9</sup>

## Exceptionally Safe

No serious side effects have been encountered with Trancoprin. Of 923 patients treated with Trancoprin, only 22 (2.4 per cent) experienced any side effects.<sup>8,9</sup> In every instance, these reactions, which included temporary gastric distress, weakness or sedation, were mild and easily reversed.

## Indications

Trancoprin is recommended for more comprehensive control of the pain complex (pain → tension → spasm) in those disorders in which tension and spasm are complicating factors, such as: headaches, including tension headaches / premenstrual tension and dysmenorrhea / low back pain, sciatica, lumbago / musculoskeletal pain associated with strains or sprains, myositis, fibrositis, bursitis, trauma, disc syndrome and myalgia / arthritis (rheumatoid or hypertrophic) / torticollis / neuralgia.

## Dosage

The usual adult dosage is 2 Trancoprin tablets three or four times daily. The dosage for children from 5 to 12 years of age is 1 tablet three or four times daily. Trancoprin is so well tolerated that it may be taken on an empty stomach for quickest effect. The relief of symptoms is apparent in from fifteen to thirty minutes after administration and may last up to six hours or longer.

## How Supplied

Each Trancoprin tablet contains 300 mg. (5 grains) of acetylsalicylic acid and 50 mg. of chlormezanone [Trancopal® brand]. Bottles of 100 and 1000.

# Trancoprin Tablets / non-narcotic analgesic

**References:** 1. DeNyse, D. L.: *M. Times* 87:1512, Nov., 1959. 2. Ganz, S. E.: *J. Indiana M. A.* 52:1134, July, 1959. 3. Gruenberg, Friedrich: *Current Therap. Res.* 2:1, Jan., 1960. 4. Kearney, R. D.: *Current Therap. Res.* 2:127, April, 1960. 5. Lichtman, A. L.: *Kentucky Acad. Gen. Pract. J.* 4:28, Oct., 1958. 6. Mullin, W. G., and Epifano, Leonard: *Am. Pract. & Digest Treat.* 10:1743, Oct., 1959. 7. Shanaphy, J. F.: *Current Therap. Res.* 1:59, Oct., 1959. 8. Collective Study, Department of Medical Research, Winthrop Laboratories. 9. Hergesheimer, L. H.: An evaluation of a muscle relaxant (Trancopal) alone and with aspirin (Trancoprin) in an industrial medical practice, to be submitted.

*Winthrop* LABORATORIES, New York 18, N. Y.

# NOW...FOR STUDENTS SPECIAL RATES UNDER BLUE CROSS- PHYSICIANS SERVICE

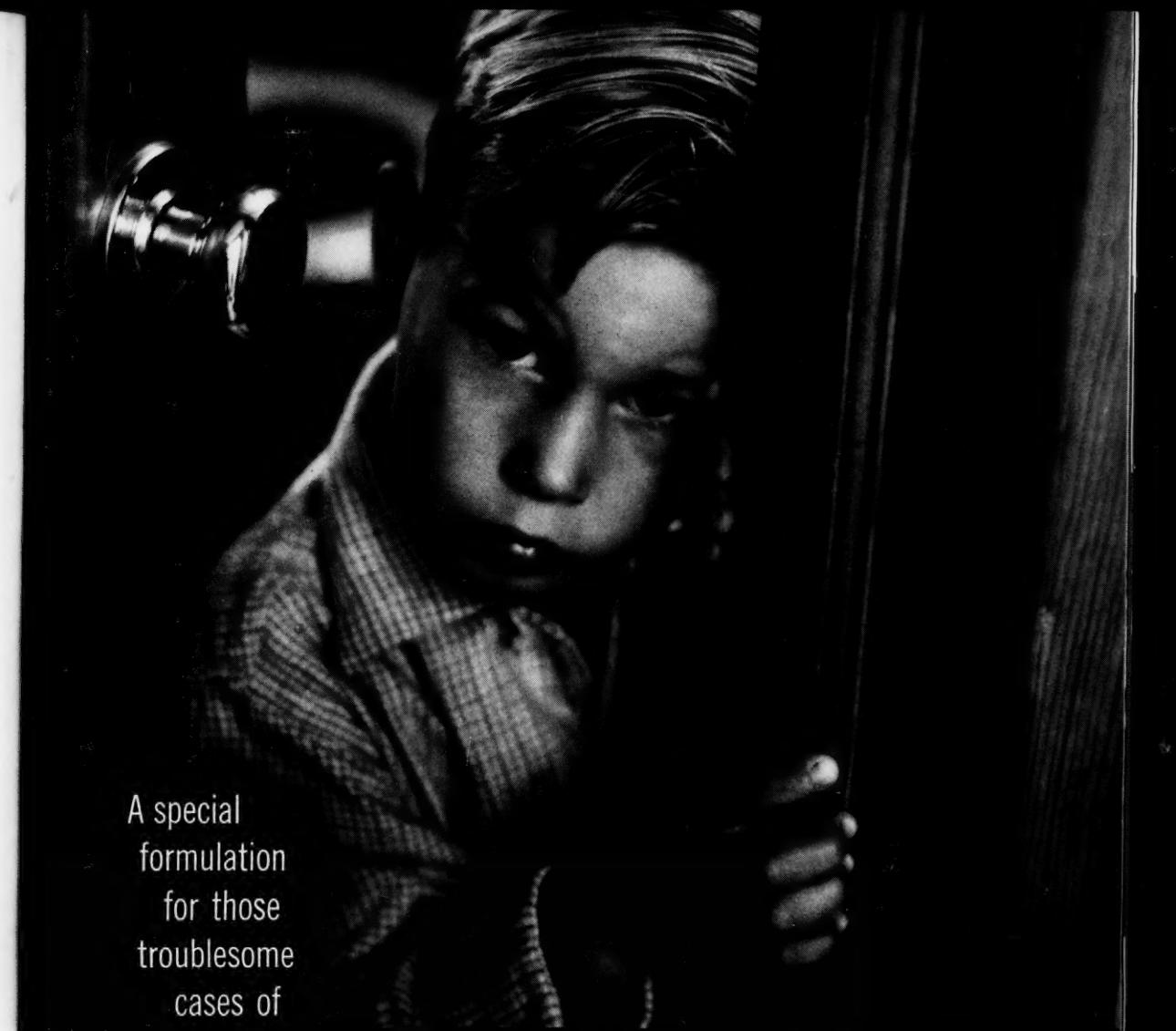
Welcome news for young men and women studying at schools and colleges above high school level . . . and for parents, too! Rhode Island Blue Cross and Physicians Service have developed a special low cost membership for students.

**WHO IS ELIGIBLE:** Full-time students up to the age of 24 are now eligible for this new membership at special low rates. This includes students beyond the high school level enrolled in recognized colleges, technical, or specialized schools. If you or any of your children qualify — whether or not you are already Blue Cross members — it will pay you to act now.

**HOW TO JOIN:** For more information and an application, send your name and address to:

**Direct Pay Dept.  
Blue Cross-Physicians Service  
31 Canal St., Providence, R. I.**

**PHONE: TE 1-7300**



A special  
formulation  
for those  
troublesome  
cases of  
acute  
nonspecific  
diarrhea

# DONNAGEL®-PG

Donnagel® with paregoric equivalent

Provides greater assurance of more comprehensive relief in acute self-limiting diarrhea through the time-tested effectiveness of two outstanding antidiarrheals—DONNAGEL and a paregoric equivalent.  
*Tastes good, too!*

Each 30 cc. (1 fl. oz.) of DONNAGEL-PG

contains:

Powdered opium U.S.P.	24.0 mg.
(equivalent to paregoric 6 ml.)	
Kaolin	6.0 Gm.
Pectin	14.8 mg.
Natural belladonna alkaloids*	
hyoscyamine sulfate	0.187 mg.
atropine sulfate	0.0194 mg.
hyoscine hydrobromide	0.0086 mg.
Phenobarbital	10.2 mg.

SUPPLIED: Pleasant tasting banana flavored suspension in bottles of 6 fl. oz.

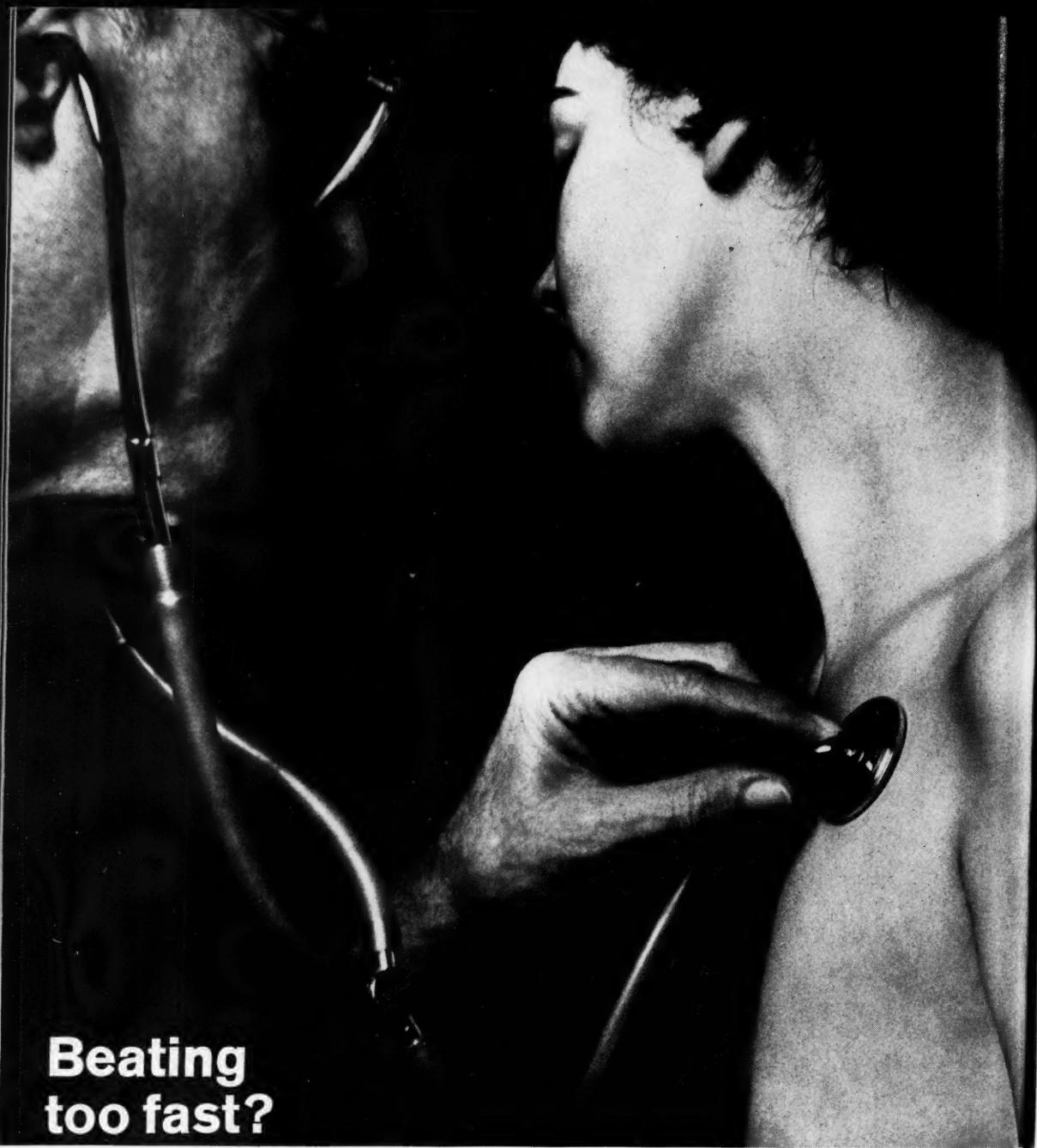
Also available:

DONNAGEL® with NEOMYCIN — for

DONNAGEL®—the basic formula—  
when antibiotic or an antibiotic is not  
required.

A. H. ROBINS CO., INC.  
RICHMOND, VA., VIRGINIA





**Beating  
too fast?**

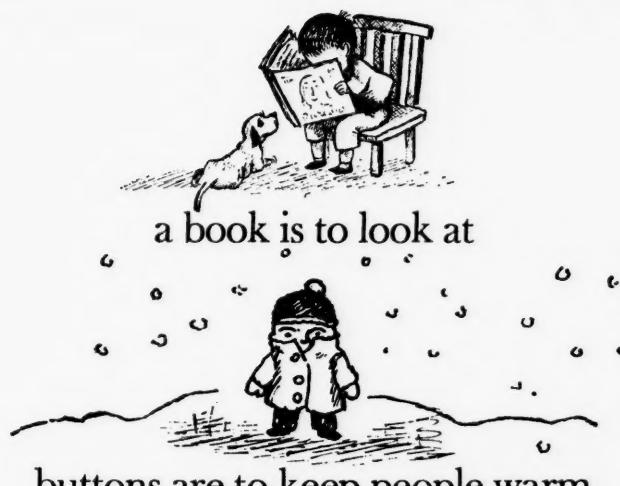
**Slow it  
down with  
**SERPASIL****

(reserpine CIBA) Serpasil has proved effective as a heart-slowing agent in the following conditions: mitral disease; myocardial infarction; cardiac arrhythmias; neurocirculatory asthenia; thyroid toxicosis; excitement and effort syndromes; cardiac neurosis; congestive failure. Serpasil should be used with caution in patients receiving digitalis and quinidine. It is not indicated in cases of aortic insufficiency.

**SUPPLIED:** Tablets, 0.1 mg., 0.25 mg. (scored) and 1 mg. (scored). Complete information available on request.

**C I B A**

SWANSEA, NEW JERSEY



buttons are to keep people warm



cats are so you can have kittens



**REDISOL**<sup>®</sup> is so kids have better appetites

**Redisol** (Cyanocobalamin, crystalline vitamin B<sub>12</sub>) often stimulates children's appetites with consequent weight gain. Tiny **Redisol Tablets** (25, 50, 100, 250 mcg.) dissolve instantly in the mouth, on food or in liquids. Also available: cherry-flavored **Redisol Elixir** (5 mcg. per 5-cc. teaspoonful); **Redisol Injectable**, cyanocobalamin injection USP (30 and 100 mcg. per cc., 10-cc. vials and 1000 mcg. per cc. in 1, 5 and 10-cc. vials).

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## ANOTHER YEAR OF SYMPOSIA . . .

### **PORTLAND, OREGON**

Wednesday, January 11, 1961  
The Sheraton-Portland Hotel

### **MONTGOMERY, ALABAMA**

Friday, January 13, 1961  
The Whitley Hotel

### **MINNEAPOLIS, MINNESOTA**

Monday, January 16, 1961  
The Hotel Leamington

### **LEMONT, ILLINOIS**

Wednesday, January 18, 1961  
The White Fence Farm

### **CINCINNATI, OHIO**

Sunday, January 22, 1961  
The Netherland Hilton Hotel

### **NEW DORP, STATEN IS., N.Y.**

Wednesday, February 15, 1961  
The Tavern-on-the-Green

### **CHARLESTON, SOUTH CAROLINA**

Thursday, February 23, 1961  
The Francis-Marion Hotel

### **ANCHORAGE, ALASKA**

Saturday, February 25, 1961  
The Westward Hotel

### **BAKERSFIELD, CALIFORNIA**

Friday, March 3, 1961  
The Bakersfield Hacienda

### **WILLIAMSBURG, VIRGINIA**

Wednesday, March 8, 1961  
The Williamsburg Lodge

### **ALBUQUERQUE, NEW MEXICO**

Saturday, March 11, 1961  
The Hilton Hotel

### **OMAHA, NEBRASKA**

Thursday, March 16, 1961  
The Sheraton-Fontenelle Hotel

### **PHOENIX, ARIZONA**

Saturday, March 18, 1961  
The Westward Ho Hotel

### **LOUISVILLE, KENTUCKY**

Thursday, March 23, 1961  
The Sheraton-Seelbach Hotel

### **BAY SHORE, LONG ISLAND, NEW YORK**

Wednesday, April 12, 1961  
The LaGrange Inn

### **BUTTE, MONTANA**

Saturday, April 22, 1961  
The Finlen Hotel

### **ITHACA, NEW YORK**

Thursday, April 27, 1961  
The Statler Club

### **ERIE, PENNSYLVANIA**

Wednesday, May 3, 1961  
The Hotel Lawrence

### **SACRAMENTO, CALIFORNIA**

Wednesday, May 10, 1961  
The El Dorado Hotel

### **LOS ANGELES, CALIFORNIA**

Wednesday, June 7, 1961  
The Statler Hotel



LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, N. Y.

Available  
New Fo

*specific  
for  
tension  
headache...*



# FIORINAL®

*relieves pain,  
muscle spasm,  
nervous tension*

*rapid action • non-narcotic • economical*

"We have found caffeine, used in combination with acetylsalicylic acid, acetophenetidin, and isobutylallylbarbituric acid, [Fiorinal] to be one of the most effective medicaments for the symptomatic treatment of headache due to tension."

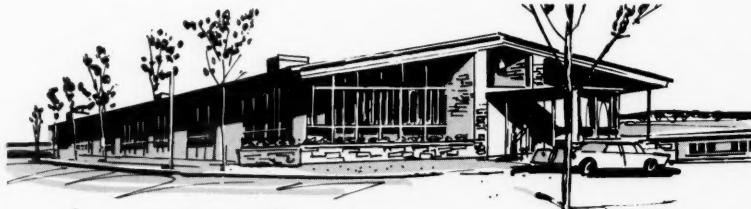
Friedman, A. P., and Merritt, H. H.: J.A.M.A. 163:1111 (Mar. 30) 1957.

Available: Fiorinal Tablets and  
New Form — Fiorinal Capsules

Each contains: Sandoptal (Allylbarbituric Acid N.F. X)  
50 mg. (3/4 gr.), caffeine 40 mg. (2/3 gr.), acetylsalicylic acid  
200 mg. (3 gr.), acetophenetidin 130 mg. (2 gr.).

Dosage: 1 or 2 every four hours, according to need, up to 6 per day.





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A non-profit nursing home for  
Convalescent and Terminal Care  
of CANCER PATIENTS EXCLUSIVELY

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forget your telephone  
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for you, day or night.**

**MEDICAL BUREAU  
of the  
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**N** For the  
multi-system disease  
**HYPERTENSION**



# SALUTENSIN<sup>TM</sup>

Hydroflumethiazide • Reserpine • Protoveratrine A

An integrated multi-therapeutic  
antihypertensive, that combines in balanced pro-  
portions three clinically proven antihypertensives.

In each SALUTENSIN Tablet:

<i>Saluron</i> <sup>®</sup> (hydroflumethiazide)—	50 mg.
<i>Reserpine</i> —a tranquilizing drug with peripheral vasorelaxant effects .....	0.125 mg.
<i>Protoveratrine A</i> —a centrally mediated vasorelaxant .....	0.2 mg.

Comprehensive information on dosage and precautions  
in official package circular or available on request.

**BRISTOL LABORATORIES • Syracuse, New York**

**Proven**  
in over five years of clinical use and  
more than 750 published clinical studies

**Effective**  
for relief of anxiety and tension

**Outstandingly Safe**

- simple dosage schedule produces rapid, reliable tranquilization without unpredictable excitation
- no cumulative effects, thus no need for difficult dosage readjustments
- does not produce ataxia, change in appetite or libido
- does not produce depression, Parkinson-like symptoms, jaundice or agranulocytosis
- does not impair mental efficiency or normal behavior

# Miltown®

meprobamate (Wallace)

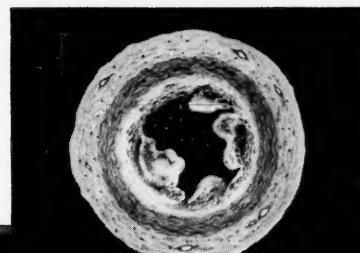
*Usual dosage:* One or two 400 mg. tablets t.i.d.

*Supplied:* 400 mg. scored tablets, 200 mg. sugar-coated tablets; or as MEPROTABS®—400 mg. unmarked, coated tablets.

 WALLACE LABORATORIES / Cranbury, N. J.

•TRADE-MARK

# outstanding nutritional research achievement



Cross section, atherosclerotic artery

to aid in the  
dietary control  
of serum  
cholesterol



# MAZOLA®

**MARGARINE**  
scientifically formulated with  
pure liquid non-hydrogenated  
MAZOLA Corn Oil.

MAZOLA Margarine is an economical tablespread and serves as a solid shortening, rich in linoleic acid and low in the more saturated fatty acids — making it an ideal dietary adjunct in the management of serum cholesterol. It contains 2 to 3 times as much linoleic acid as any other margarine in the grocery store, and 5 to 8 times as much as butter. It contains no dairy or animal fats, no coconut oil, and no cholesterol.

MAZOLA Margarine is indistinguishable from other quality margarines as to taste, aroma and handling characteristics. Thus, it can be part of the regular diet for the whole family, including the hypercholesterolemic patient. The major ingredient in MAZOLA Margarine — liquid MAZOLA Corn Oil—is NOT hydrogenated, thereby preserving its rich content of linoleates.



Two ounces or 56.8 Gm. (4 tablespoons) of  
MAZOLA Margarine supply:

Linoleic acid .....	12 Gm.
Oleic acid .....	23 Gm.
Saturated fatty acids .....	8 Gm.
Plant sterols (sitosterols) .....	215 mg.
Natural tocopherols .....	30 mg.
Vitamin A .....	1870 USP units
Vitamin D .....	250 USP units
Calories .....	415

Available in the refrigerator sections of grocery stores in the same general price range as other premium quality margarines, in 1-lb. packages (four 1/4 lb. sticks).

Send for free booklet:  
"Recent Advances in the Dietary Control  
of Hypercholesterolemia."



**BEST FOODS • Division of Corn Products Co., NEW YORK 22, N.Y.**

now—for  
more comprehensive  
control of  
*'pain & spasm'*



*due to  
social  
stress or  
acute rela-*

# Robaxin®

ROBAXIN® WITH ASPIRIN™



...and in them  
you'll find relief—  
relief from your  
acute pain and  
stress. Robaxin®

—Robaxin®—  
has the power to  
stop muscle spasms, with un-  
equalled effectiveness.

—Aspirin—  
which gives you  
the same relief  
as an anti-inflam-  
matory drug.

Robaxin® comes in two forms—pink-and-  
white tablets containing 325 mg. (Robaxin®)  
and 500 mg. (Robaxin®) and white tablets  
containing 1.0 Grm. (Robaxin®) and 1.5 Grm.  
(Robaxin®). Robaxin® tablets contain 325 mg.  
of aspirin, 6.5 Grm. of calcium carbonate,  
and 100 mg. of magnesium carbonate.

For further information, write to: Robins  
Company, Inc., Room 1000, 100 Hudson Street,  
New York, New York 10013.



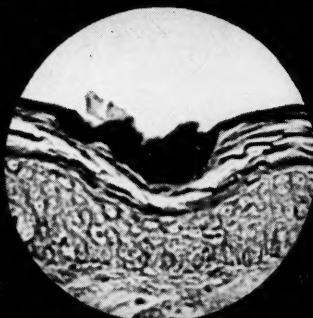
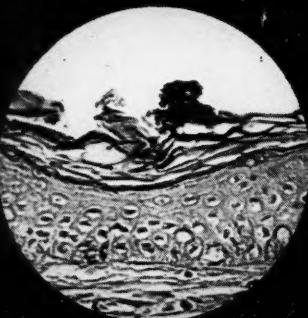
A. H. ROBINS CO., INC., Richmond 20, Virginia

*new study:*

*"almost universally rapidly curative"<sup>1</sup> in  
infantile eczema*

Biopsy section from skin stained with osmic acid after treatment for one week with placebo base shows little unsaturated oil (black stain) on the surface and practically none within the epidermis.

Biopsy section from skin stained with osmic acid after treatment with Desitin Ointment for one week shows much unsaturated oil (black stain) on the surface and also within the epidermis. Unsaturated oils are important constituents of natural emollients.



# DESTITIN<sup>®</sup> OINTMENT



*restores unsaturates via fatty acids of external cod liver oil*

Spoor finds<sup>1</sup> that Desitin Ointment topically replenishes unsaturated fatty acids dermally deficient<sup>1-4</sup> in many babies with infantile eczemas. Desitin Ointment was selected because its rich cod liver oil unsaturates resemble those naturally found in the skin.

Desitin plus antiallergenic therapy proved . . .

*"almost universally rapidly curative", with great improvement or clearing of the condition in all babies in from one to five weeks.<sup>1</sup>*

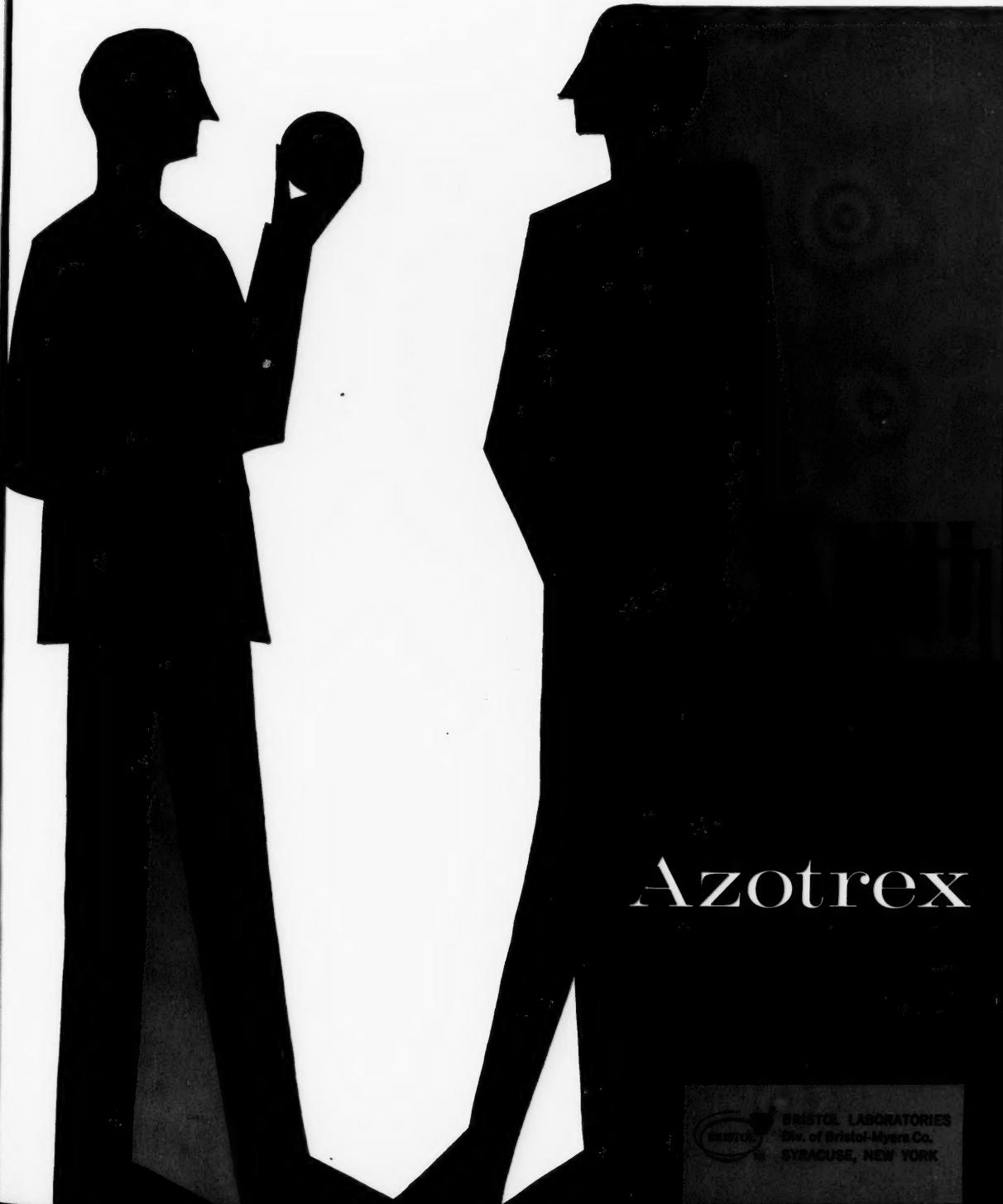
for samples of soothing, protective, healing Desitin Ointment and reprint, please write . . .

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812 Branch Avenue, Providence 4, R. I.

1. Spoor, H. J.: New York St. J. M. 60:2863, 1960.
2. Wiese, H. F., et al.: J. Nutrition 66:345, 1958.
3. Smith, L. W., et al.: Amer. J. Med. Sc. 237:600, 1959.
4. Nutrition Reviews 17:136, 1959.

*"Well, I'll send the culture to the lab, and we should hear from Bacteriology in a day or two. Now, how shall we treat her cystitis while we're waiting?"*

*"The chief usually orders AZOTREX. The azo dye is an excellent urinary analgesic and the sulfamethizole and tetracycline are likely to take care of most of the bugs you find in the urinary tract. If necessary, you can switch to something else after you get the lab findings. But it probably won't be necessary."*



## Azotrex



BRISTOL LABORATORIES  
Div. of Bristol-Myers Co.  
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A NEW THERAPEUTIC ENTITY FOR DIARRHEA

# LOMOTIL®

SELECTIVELY LOWERS PROPULSIVE MOTILITY

**LOMOTIL** represents a major advance over the opium derivatives in controlling the propulsive hypermotility occurring in diarrhea.

Precise quantitative pharmacologic studies demonstrate that Lomotil controls intestinal propulsion in approximately  $\frac{1}{11}$  the dosage of morphine and  $\frac{1}{20}$  the dosage of atropine and that therapeutic doses of Lomotil produce few or none of the diffuse untoward effects of these agents.

Clinical experience in 1,314 patients amply supports these findings. Even in such a severe test of antidiarrheal effectiveness as the colonic hyperactivity in patients with colectomy, Lomotil is effective in significantly slowing the fecal stream.

Whenever a paregoric-like action is indicated, Lomotil now offers positive antidiarrheal control...with safety and greater convenience. In addition,

as a nonrefillable prescription product, Lomotil offers the physician full control of his patients' medication.

**PRECAUTION:** While it is necessary to classify Lomotil as a narcotic, no instance of addiction has been encountered in patients taking therapeutic doses. The abuse liability of Lomotil is comparable with that of codeine. Patients have taken therapeutic doses of Lomotil daily for as long as 300 days without showing withdrawal symptoms, even when challenged with nalorphine.

Recommended dosages should not be exceeded.

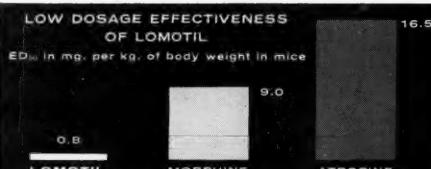
**DOSAGE:** The recommended initial dosage for adults is two tablets (5 mg.) three or four times daily, reduced to meet the requirements of each patient as soon as the diarrhea is controlled. Maintenance dosage may be as low as two tablets daily. Lomotil, brand of diphenoxylate hydrochloride with atropine sulfate, is supplied as unscored, uncoated white tablets of 2.5 mg., each containing 0.025 mg. ( $\frac{1}{2400}$  gr.) of atropine sulfate to discourage deliberate overdosage.

Subject to Federal Narcotic Law.

Descriptive literature and directions for use available in Physicians' New Product Brochure No. 81 from

**G. D. SEARLE & CO.**  
P.O. Box 5110, Chicago 80, Illinois

*Research in the Service of Medicine*



EFFICACY AND SAFETY of Lomotil are indicated by its low median effective dose. As measured by inhibition of charcoal propulsion in mice, Lomotil was effective in about  $\frac{1}{11}$  the dosage of morphine hydrochloride and in about  $\frac{1}{20}$  the dosage of atropine sulfate.

ANNOUNCING—  
SPECIFICALLY FOR  
INFECTIONS DUE TO  
"RESISTANT" STAPHYLOCOCCI

AN ENTIRELY NEW SYNTHETIC  
"STAPH-CIDAL" PENICILLIN

**Staphcillin**<sup>TM</sup>

sodium dimethoxyphenyl penicillin  
FOR INJECTION

UNIQUE—BECAUSE IT  
RETAINS ANTIBACTERIAL  
ACTIVITY IN THE PRESENCE OF  
STAPHYLOCOCCAL PENICILLINASE  
WHICH INACTIVATES  
OTHER PENICILLINS



**UNIQUE SYNTHETIC "STAPH-CIDAL" PENICILLIN**

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OFFICIAL PACKAGE CIRCULAR  
November, 1960

**STAPHCILLIN™**

(sodium dimethoxyphenyl penicillin)

For Injection

**DESCRIPTION**

STAPHCILLIN is a unique new synthetic parenteral penicillin produced by Bristol Laboratories for the specific treatment of staphylococcal infections due to resistant organisms. Its uniqueness resides in its property of resisting inactivation by staphylococcal penicillinase. It is active against strains of staphylococci which are resistant to other penicillins.

*Each dry filled vial contains:* 1 Gm. STAPHCILLIN (sodium dimethoxyphenyl penicillin), equivalent to 900 mg. dimethoxyphenyl penicillin activity.

**INDICATIONS**

STAPHCILLIN is recommended as specific therapy only in infections due to strains of staphylococci resistant to other penicillins, e.g.:

*Skin and soft tissue infections:* cellulitis, wound infections, carbuncles, pyoderma, furunculosis, lymphangitis and lymphadenitis.

*Respiratory infections:* staphylococcal lobar or bronchopneumonia, and lung abscesses combined with indicated surgical treatment.

*Other infections:* staphylococcal septicemia, bacteremia, acute or subacute endocarditis, acute osteomyelitis and enterocolitis.

Infections due to penicillin-sensitive staphylococci, streptococci, pneumococci and gonococci should be treated with Syncillin® or parenteral penicillin G rather than STAPHCILLIN. Treponemal infections should be treated with parenteral penicillin G.

**DOSAGE AND ADMINISTRATION**

STAPHCILLIN is well tolerated when given by deep intragluteal or intravenous injection.

As is the case with other antibiotics, the duration of therapy should be determined by the clinical and bacteriological response of the patient. Therapy should be continued for at least 48 hours after the patient has become afebrile, asymptomatic and cultures are negative. The usual duration has been 5-7 days.

*Intramuscular route:* The usual adult dose is 1 Gm. every 4 or 6 hours. Infants' and children's dosage is 25 mg. per Kg. (approximately 12 mg. per pound) every 6 hours.

*Intravenous route:* 1 Gm. every 6 hours using 50 ml. of sterile saline solution at the rate of 10 ml. per minute.

\**Warning:* Solutions of STAPHCILLIN and kanamycin should not be mixed, as they rapidly inactivate each other. Data on the results of mixing STAPHCILLIN with other antibiotics are being accumulated.

**DIRECTIONS FOR RECONSTITUTION**

Add 1.5 ml. sterile distilled water or normal saline to a 1 Gm. vial and shake vigorously. Withdraw the clear, reconstituted solution (2.0 ml.) into a syringe and inject. The reconstituted solution contains 500 mg. of STAPHCILLIN per ml. Reconstituted solutions are stable for 24 hours under refrigeration.

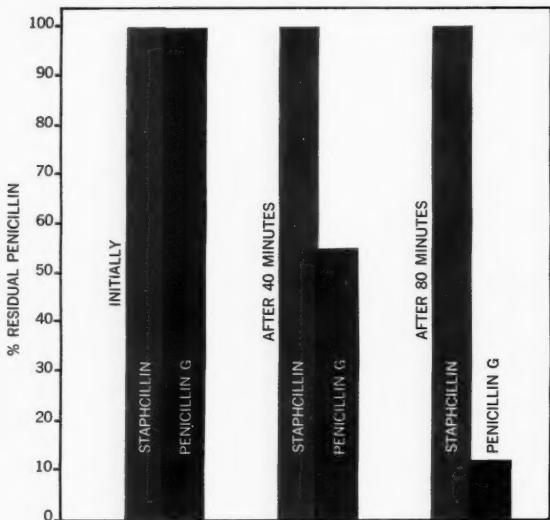
For intravenous use, dilute the reconstituted dose in 50 ml. of sterile saline and inject at the rate of 10 ml. per minute.

\*This statement supersedes that in the Official Package Circulars dated September and/or October, 1960.

(continued)

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In the presence of staphylococcal penicillinase, STAPHCILLIN remained active and retained its antibacterial action. By contrast, penicillin G was rapidly destroyed in the same period of time.  
(After Gourevitch et al., to be published)

*Specifically for "resistant" staph...*

# Staphcillin™

sodium dimethoxyphenyl penicillin  
FOR INJECTION

The failure of staphylococcal infections to respond to penicillin therapy is attributed to the penicillin-destroying enzyme, penicillinase, produced by the invading staphylococcus.

*Unlike other penicillins:*

- 1 STAPHCILLIN is effective because it retains its antibacterial activity despite the presence of staphylococcal penicillinase.
- 2 The clinical effectiveness of STAPHCILLIN has been confirmed by dramatic results in a wide variety of infections due to "resistant" staphylococci, many of which were serious and life-threatening.

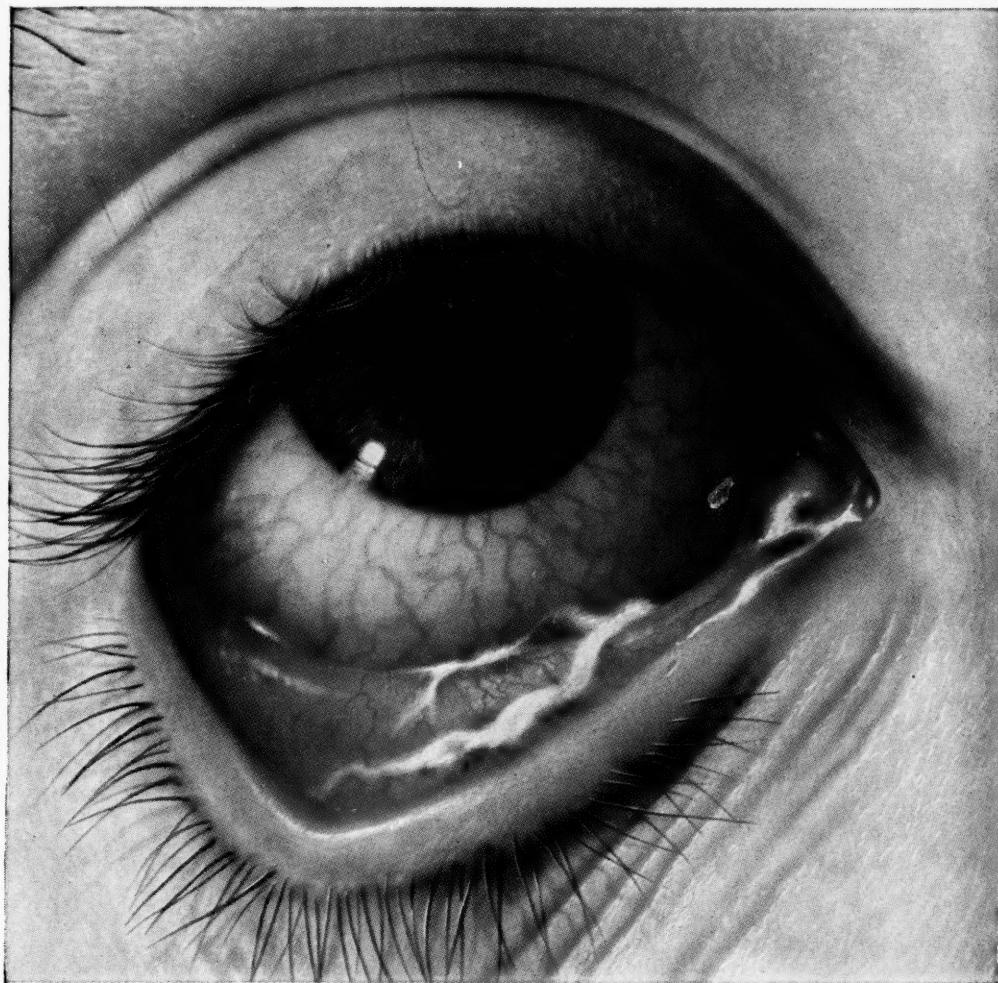
*Like other penicillins:*

STAPHCILLIN has no significant systemic toxicity. It is well tolerated locally, and pain or irritation at the injection site is comparable to that following the injection of penicillin G. *In occasional cases, typical penicillin reactions may be experienced.*

**PROFESSIONAL INFORMATION SERVICE** — The attached Official Package Circular provides complete information on the indications, dosage, and precautions for the use of STAPHCILLIN. If you desire additional information concerning clinical experiences with STAPHCILLIN, the Medical Department of Bristol Laboratories is at your service. You may direct your inquiries via collect telephone call to New York, PLaza 7-7061, or by mail to Medical Department, Bristol Laboratories, 630 Fifth Ave., N.Y. 20, N.Y.

BRISTOL LABORATORIES • SYRACUSE, NEW YORK

Division of Bristol-Myers Company



no irritating crystals<sup>1</sup> • uniform concentration in each drop<sup>2</sup>

**STERILE OPHTHALMIC SOLUTION**

# **NEO-HYDELTRASOL®**

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1. Lippmann, O.: Arch. Ophth. **57**:339, March 1957.

2. Gordon, D.M.: Am. J. Ophth. **46**:740, November 1958.

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of the

PROVIDENCE MEDICAL ASSOCIATION

MONDAY . . . . . JANUARY 2, 1961

at the

Rhode Island Medical Society Library, at 8:30 p.m.

\* \* \*

SPEAKER :

F. A. SIMEONE, M.D.

*of Cleveland, Ohio*

Professor of Surgery, Western Reserve University School of Medicine

SUBJECT :

"THE CONTRIBUTIONS OF SURGICAL  
RESEARCH TO HUMAN PHYSIOLOGY"



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